

Commodore NETWORK

AUSTRALIA
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August 1995

Supporting the Commodore range of 8 bit computers

NEWSWATCH

dieHard!

It seems that this American publication is living up to its name! dieHard magazine has not been published for some considerable time now, but it still seems that the intention is there to republish soon.

Last month in a "News Watch" article entitled "The Gazette Saga", I told you of a rumour that dieHard has taken over the subscriptions of all ex-Gazette subscribers. This appears to have been confirmed (from several sources).

The magazine's editor, Brian Crosthwaite, seems to feel that the next issue will be forthcoming in either August, or more likely, September. Let's hope that they can get things back on track, despite the cost increases they've reportedly encountered.

64NET

For those of you unfamiliar with this product, it is a cabling/software system that allows the user to hook directly to a PC and utilise its Hard drive. Paul Gardner Steven, its creator, is now working on version #2, which will allow the user to hook the PC up via the User or Cartridge ports, or via the serial bus (just like a normal drive). Needless to say, this will add greatly to the versatility of what is already a "must have" for any serious Commodore user.

A GEOS GEM

Many of you will have heard of Maurice Randall. We have often carried news of his latest ventures into GEOS programming in News watch and in other sections of our publication. His newest challenge is the programming of a CD ROM driver for GEOS which will doubtless need the user to have access to a hard drive or similar SCSSI device connected to their Commodore.

His logic for the production of this software is for specific use with "Finally!", his C128 version of GeoPublish.

Other Maurice Randall projects currently under way are geoFAX (almost ready), and PhotoFrame (a commercial upgrade to geoMorph - see Disk-Coverer #9, GEOS disk).

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Commodore **NETWORK**

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Editorial

Welcome to another month's Commodore capers! There doesn't seem to be much going on around the traps at present, although I almost had enough material for another "Update" column this month.

Commodore Network is presently evaluating up to 48 games for importation into Australia before Christmas, two ("Slaterman" and "Lazer Duel") of which will be reviewed in upcoming "Power Drift" columns. We are hoping for a retail cost to readers of something in the order of \$15 - \$17 Australian each, but this will largely depend on exactly what we have to bring in, the tax we may have to pay, and the value of the good ol' Aussie Dollar! In fact, if all things pan out, we may well be selling cheaper than in America, as the advertised price for the NTSC versions of these games is around U.S.\$20 each. As with all things, we'll just have to wait and see how things pan out.

Also on the local front, and CND have confirmed that they have been talking to JDB Software re distribution of their product in Australia and informed him of their requirements. I have yet to hear from John as to whether he will take on the task, but I will keep you all informed. As I have stated previously, if JDB do not want to press on with this, C.N. will look in to the pros and cons, although I don't want us tied down to investing in too much "dead" or slow-moving stock, no matter how tempting it might be to hang a 1 Gig hard drive off one of my 128's.

Overseas, and in America a new GEOS publication has seen the light of day. I have yet to see or hear too much about it, so I am unsure of its current standing, but I wish them well. Until I can confirm regular publication though, I will not publish an address in C.N. I've seen too many fold overnight, despite the best of intentions by those running them.

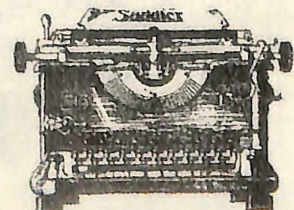
Back home, and C.N. has recently been informed that it is now to be the Australian distributors for two new (to Australia) pieces of GEOS software in GeoCom 1.5 - a compiler for GEOS for all those budding GEOS programmers out there, and the Software Collection for GEOS (5 disks). both are of German origin, but come with English language documentation, and, indeed, the programs too, have been "Anglicised". Tentative pricing has them selling for around Aus.\$68.00 and \$80.00 respectively.

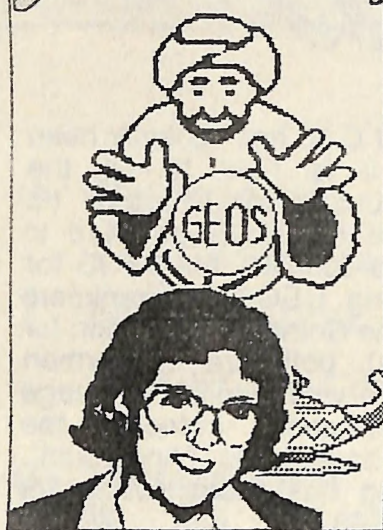
Still on the GEOS front, and we have recently been informed that we have the Australian distribution rights to an upgraded and updated "The GEOS Programmer's Reference Guide", two compendiums of the former GeoJournal magazine, and "Hitchhiker's Guide to GEOS" (with software). Approximate prices should be around \$50.00, \$35-\$45 each, and \$28.00 on current reckonings. We also look set to be able to offer "The Inner Space Anthology" if things pan out.

As of this issue, we are making available "The Best of The Transactor, volume 1". This covers the very early days of "The Transactor" magazine when it was still being published by Commodore, and as such, deals largely with the Pet computers. It is, however, an invaluable reference source for those interested in "classical" computers, or with a bent for research. It will sell for Aus.\$20.00.

Warren

Warren Naismith - Editor





This month, we Review GeoCanvas64 v3.0 - the one no-one has talked about yet, by Nathan L Fiedler PA USA, and distributed in Australia by Peter Hunt VIC. Everyone, including myself, has written about GeoCanvas128 v3.0 because of its glorious 80 columns colour feature. Unfortunately, this meant that GeoCanvas64 v3.0 was accepted, but not noted. Here we will try and redress this situation, because GeoCanvas v3.0 in either form, is a massive piece of programming, and it is certainly worth much more than a second look.

This Review will be concentrating on the upgraded areas of v3, and it's improved performance and features. GeoCanvas v3.0 is supplied on a floppy 1541 disk, in the version you have ordered. Brief documentation is provided. The disk contains geoWrite 'read me' files. GeoCanvas v3.0 requires the user to own a Ram Expansion Unit (REU), with at least 512K RAM, and to own and use either GEOS64 v2.0 or GEOS128 v2.0. The REU is needed due to GeoCanvas v3.0 having several more advanced

features which were designed around a slightly more powerful system than the stock GEOS64 or 128.

GeoCanvas v3.0 must be installed on the disk it came on before you can use it, like v1.2. With that done, creating Work disks follows the same procedure as with any of the major GEOS Applications. Naturally, geoCanvas will operate faster when used from a RAM disk, and this is recommended by the author. For more information on Work disks, refer to the section 'GEOS Work Disks' in 'The World of GEOS HandBook I' (**).

As an upgrade to the previous release of v1.2, the new release of geoCanvas v3.0 {gCv}, is truly remarkable. There are two separate versions one for GEOS128 {80 columns} and one for GEOS64 / 128 {40 columns}.

GeoCanvas64 v3.0 can be installed in either GEOS64 {it then will not operate in GEOS128}, or it can be installed in GEOS128 40 column mode {it will then not operate in GEOS64}. Under testing it proved to be quite accommodating.

All gCv files have a gCv icon, and are still compatible with geoPaint, but when double-clicked upon will activate gCv and not geoPaint. This is referred to as 'ownership' in the

documentation, meaning that gCv is the 'parent application' program. GeoPaint files will activate geoPaint, and gCv files will activate gCv. Quite simple really. However, geoPaint can 'open' gCv files, and gCv can 'open' geoPaint files, giving the user the best of both worlds.

The three support programs, ScrapCan, PaintCan, and FontCan were also passed through the upgrade machine by Nate. {More on these later}.

The Menus

The main Menu has been altered to include geos, file, options, and tool attributes. The geos sub-Menu consists of info, special DA window, desk accessories, and set screen mode {for gCv128 users with 64K VDC RAM installed}.

The file sub-Menu has the standard create, open, close, update, recover, and now preview and fullview, rename, print and quit. The options sub-Menu shows select tool, grid lines, colour, xyd in pixels, edit pattern, undo change, add tool, and delete tool {delete is not to be used unwisely}.

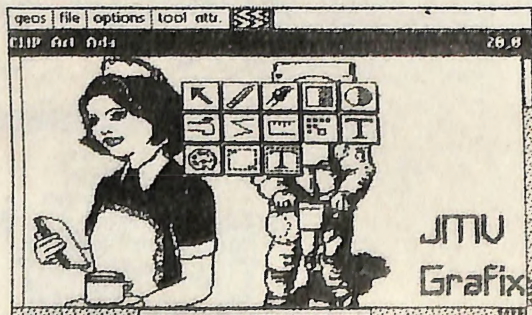
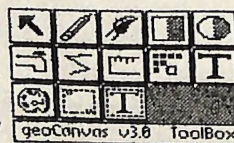
The tool attributes sub-Menu defaults to smooth scroll for use with the Pointer tool. Any tool attribute toggle options that are selected, will display an asterisk {*} in their Menu. Many options that would seem to have been dropped from gCv are now able to be found on the tool attributes sub-Menu when a particular tool is selected. Such as the eraser, edit brush, ruler tie mark, constrain, pixel edit, frame shapes, and others.

The default tool for gCv is the Pointer. The 'Pointer tool' is also available from the Toolbox. The Toolbox is not displayed until you call it with C=T. Without adding any tools, only the Pointer is displayed in the Toolbox square.

Other Differences

One point of interest is the absence of the close button on the Drawing Window {DW}. You must now close your document from the file Menu. In it's place are position co-ordinates, giving your location in cards from the top and left side of

geo Canvas



the home position on your document.

The first thing I noted with gCv64 was that it did not alter the system preferences to grey on grey, as the gCv128 version did. The second thing most noticeable when using gCv is that the user no longer has to select the Pointer tool prior to moving the DW. This change is a really brilliant programming initiative for the upgrade.

With v3.0, if you have a tool active when you go to click on the scroll bars or arrows to move the DW, gCv loads the Pointer automatically and performs the move. Real slick that, I love it, considering I always absent-mindedly forgot to reselect the Pointer tool with v1.2, and used to click away in great earnest, until I remembered to re-select the Pointer !. But, if you need that tool again, you must select it back from the Toolbox.

The third aspect is the DW. The depth of the DW is significantly deeper than geoPaint. It allows the user to access more of the document in comparison. The fourth asset is not noticeable, until you require a tool that is. The tools are arranged in a modular style system, or dynamic tool table. After installing gCv, and before using it, you 'add tool' {s}, from the options sub-Menu. You only need add tools as you require them. The eleven familiar tools are supplied as modular routines to be 'added' to gCv.

This is an excellent feature. It's sheer versatility allows up to 30 tools to be incorporated in your custom gCv. Tools can be supplied by other authors if they are designed for gCv. This makes gCv more flexible and expandable than Painters could have hoped it to be. What a potential for the future !. This really leaves geoPaint standing in the water !.

One more point about the tools. Once you have 'added' them to gCv, the separate tool files are not required on the work disk with gCv. If you work from your REU, you only need copy over gCv with the tools added !.

The Toolbox

The Toolbox, once toggled on with C=T is visible in the DW until you select a tool or the Pointer. On

selecting a tool, the 'tool attribute' sub-Menu contains all the features available with that tool. When you select a tool's attribute an asterisk (*) is displayed on the sub-Menu.

Click on the tool required and the Toolbox disappears until the next time. Now however, with your selected tool active, to access its features you select the tool attributes sub-Menu from the main Menu. Each time you select a new tool, the attributes Menu will change to that tool's attributes, although there are some tools that do not have a sub-Menu of attributes.

In general the tools available are the pencil, brush, rectangle, ellipse, flood, line {lines and rays}, ruler, pixel edit, text, colour {must be on}, edit, and the default Pointer. Selecting a tool from the Toolbox causes the Pointer to change it's shape to a miniature of the tool selected. Real cute that. You can't forget what you were last using !.

What is the extra 'T with a fence' in the Toolbox ? It is the gadget for the new 'TextII' tool currently being tested. The modular nature of gCv can now be seen as the benefit mentioned above. As new tools are written, they can be added to the Toolbox for testing and subsequent sale as additional units to gCv. Something absolutely unheard of with the geoPaint's that came with GEOS.

What's Unchanged ?

gCv will still recognise three active drives, and handle up to three open files at a time. In gCv you may only be working actively in one of the three files, but you can switch to another with just a click of the Pointer. gCv also gives the ability to resize the DW any time you wish, using the 'resize button'.

The method used by gCv to reposition the DW is superior to geoPaint, using either the 'scroll bars' or 'control arrows' that are on screen. gCv also has the ability to move the top left corner of the DW via the 'title bar' {this will only work if the new DW size is smaller than the full DW size}.

If you have geoWizard already installed it is necessary to deactivate it. As I have only a 512K 1250 REU, the clash was caused by both programs attempting to occupy

Bank 7 of the REU.

The pixel edit mode of gCv is not especially elegant, and does not have all the tools available as in geoPaint, but it is reasonable. Also the 'paste' scrap option of the 'fence' edit tool does not carry the features that geoPaint does. For instance there is no scaling, choice of pattern, or smoothing available.

Less is More

When you go to use the familiar keyboard short cuts provided in v1.2, you will get a surprise. The short cuts for all Menus, except for the Toolbox, have been removed. The short cuts are now concentrated in the tool attributes sub-Menu where applicable. The Toolbox can no longer be repositioned, but it doesn't matter anymore as it disappears once a tool is selected.

Other features that have been removed are blackout, time/date display, and the left border of the window. One other feature that you will miss is the 'click-next-to-scroll-bar-move' routine. Just click directly on the slider instead to move it. gCv definitely is a must for all GEOS users who have RAM units.

Support Programs

ScrapCan is simple to use, and is an elegant program whose time has come. It performs essentially the same as the version with gCv v1.2. ScrapCan allows you to preview an existing gCv, or geoPaint file from up to FOUR drives, and select a large graphic via a defined region tool. This includes graphics that are larger than the normal DW size. Once defined you can 'copy' the graphic to a Scrap along with any colour data, then open another file, define a region for the graphic, and 'paste' it in. The only drawback is that it will not allow you to 'reposition' a large graphic. If you didn't get it right the first time you will have to start again.

A notable change is that desk accessories are now available from the geos Menu, and the quit option has been placed on the file Menu. The next most noticeable improvement is the inclusion of an option to paste transparently to your destination document, prior to the DBox for colour. If selected, the data from the scrap is blended into the existing data in the document.

Disk errors are more closely monitored by the program than before. ScrapCan is a great accessory program for any graphic collector or clip-o-holic. With only a small amount of planning, ScrapCan does everything you need.

PaintCan in it's re-worked form is also a great accessory to gCv. While PaintCan changes the 'parent application' ownership just as it did before, the user can now toggle some features. If you find gCv more useful than geoPaint, you can use PaintCan to change a geoPaint document file to be recognised as a gCv file {the reverse is also available}. After that, when you double-click on the document file, gCv will be activated instead of geoPaint. Toggle 'change icon' to prevent a customised icon being overwritten, and toggle 'converting colours' from VIC 40 column mode colours to VDC 80 column colour mode. {This applies to gCv128 users to get the colours right, and is a one way process}.

FontCan still performs it's initial main function. FontCan's job is to add the delete character to a font's definition table so that the font will work correctly with gCv when using the DEL key.

For an Artist, I found the new gCv very versatile and useful in this new upgraded form. Many of Nate's changes have indeed made the program much easier to use than v1.2. You don't need to look further than geoCanvas and ScrapCan for a good reason to purchase this package. If you only have GEOS64, or can only work in 40 columns in GEOS128, don't overlook this program. There is no need to miss out on all the excitement. It is absolutely well worth it, and it deserves full user support. While CBM and GEOWORKS have gone / moved on, Nate continues to provide, not just an excellent program, but continuing support for users. Who can ask for more ?.

GeoCanvas v3.0 is available direct from Nate L Fiedler 5711 Mt. Pleasant Road Bernville PA 19506-9313 USA. Enquire for shipping details. [Allow for conversion rates and bank charges]. Or in Australia, GeoCanvas v3.0 is distributed by Peter Hunt 70 Betula Road Doveton VIC 3177.

{Indicate the version required, 64 or 128} (*) Prices may be Subject to change. Enquire for shipping details.

	[*]USD	[*]AUD
GeoCanvas 64	\$28:00	\$36:00
GeoCanvas 128	\$28:00	\$36:00
Or Both versions	\$43:00	\$55:00
Demos&Tool Programming notes	\$3:00	\$2:00
Upgrade to GC64 from v1.x	\$13:00	\$24:00 {with old disk}

Readers Three Wishes And All That ...

From Robert Lord of Wodonga VIC, "I enjoyed your last column in CN [Mar95], as I am a big fan of AutoExec files that make GEOS more of a joy to use. As we all know, GEOS is not perfect, but these files overcome some of the faults. I myself use most of the files / applications you mentioned, including DualTop128 v3.0. However, I thought I might mention some other AE files that I also use, which I am sure you are aware of but others may not be.

A very handy AE file for the 128 GEOS user is 128Fix128Kbd v1.0 by Irv Cobb. This file will reconfigure the ENTER key on the numerical keypad on the 128's keyboard to work as the RETURN key. I also have BlackOut128 v1.1 by Jean F Major, on my Boot disk. This is a screen-saver that blanks out your screen after a period of inactivity from the keyboard or mouse. Another AE file I like is FancyStart v1.0 by Anthony Somers. This file just gives GEOS an attractive start up screen to impress those PC users. All the best 'til next time'.

Gg. Thanks for your feedback Robert, and you were spot on there. I tried to direct the March column at the problems a lot of users have, that have already been solved by third party GEOS software. Perhaps a follow up column will be necessary to go over all the other AE files that we more experienced users take for granted, but the less experienced do not know about yet. Thanks for that. By the way, FancyStart is on all my boot disks, I just love that colourful display in either 40 or 80 columns.

Next month, well as yet the column hasn't been prepared, but the things I am thinking of at the moment will

coalesce {come together} soon. There will also be a catch up with readers since I have had to leave many of the letters out this time due to space limitations. In other words, I don't think 'they' will let me get away with five pages [grin]. Until then, happy GEOSing.

Send in your comments, or great GEOS discoveries, and I will respond when I can in this column, unless you wish a private reply, in which case please send a SSA{Business}E and I will write you back. Special thanks to Rick Coleman {Photo Mover fame}, our USA GENie BBS correspondent for your continued support, and to Michael Renz {Performance Peripherals Europe}, our German correspondent, for your continued support.

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South Australia

(**) The World of GEOS Handbook Series (I, II, III), are currently available from JMV Grafix

JMV Grafix

The Handbook of Commodore Disks	\$15
The Handbook of Commodore 128	\$15
The Handbook of Commodore 64	\$15
World of Geos Handbook	\$15
World of Geos Handbook II	\$15
World of Geos Handbook III	\$15
Geos in Review	\$10

Prices include Postage and Handling within Australia, and are quoted in \$A. Overseas orders please add \$A5.00

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It's a fairly long story but, hopefully, the end has now arrived so for those of you who have already used a version of the PCX/GeoPAINT graphics converter, which I have been rehashing for the past year or so, and have seen strange things occurring, then here are some explanations.

The files which were included on CN.GEOS Disk 3 dated February 1995 contained an error in the compaction to GEOS format. It didn't happen to every conversion but turned up once in a while when a certain combination of data was read by GEOS. Sorting out the compaction was quite a job as the information in the GEOS Programmer's Reference Guide was incorrect and I had to work out a method acceptable to GEOS by reconstructing hi-res. pictures from the data in existing picture files - if you know what I mean.

Those files and the subsequent V2.0 which corrected the compaction error (it has already been fairly widely circulated, originally for testing purposes) are now found to produce files which, although they form unblemished pictures, are stricken by what I will call the ZERO BUG. Its effect was not noticed by anyone, apparently, except Peter McGuinn of New Zealand, an enthusiastic GeoCLUB OZ art provider, who recently sent me a graphic illustration of what was happening to his pictures in GeoPAINT when he tried to scroll below them.

From square one I have tested all the converters by viewing the results with GeoView and also in GeoPAINT V2/C128, where I could scroll below the graphic with no apparent problems. However, upon receipt of Peter's letter, it occurred to me to try and add further data below the graphic. This the drive ignored when using both 'preview' and 'update' options and the file was closed without being able to add anything to it in the 'Y' direction.

It was when I loaded a PCX conversion into GeoPAINT V2/C64 that I was able to reproduce Peter's experiences exactly. Scrolling below the graphic caused parts of the graphic to 'double image' in the area below and the drive complained loudly as the picture was scrolled down and up

THE PERILS OF PROGRAMMING

Problems with the PCX/GEOS graphics converter, and how to rectify them!

repeatedly. Again it was not possible to add any further data to the file in the 'Y' direction except that on occasion the 'double imaging' became a permanent part of the picture.

I've now found the cause of the problem and it is undoubtedly GEOS teaching me a lesson for daring to tackle it with straightforward COMMODORE programming instead of doing all things via geoProgrammer and the drive routines it provides!

My apologies to all and particularly to Peter Hunt whose CN GEOS Disk for August 1995 has had a last minute alteration to accommodate Version 3, which will provide conversions without the ZERO BUG problem. Next?

FIXING THE FAULT YOURSELF

For those who are in possession of converted PCX graphics and have been prevented from using them for purposes other than printer dumps by this error, the good news is that a fix can be effected quite simply with a track and sector editor.

First make a copy of the disk concerned so that any experimenting that comes to grief won't leave you without the original. Find the name of the file you want to fix wherever it may be on track 18 of the disk and then take note of the two bytes which appear in the hexadecimal positions \$03/\$04 immediately before the file name, if it is the first one in that

sector. For the second file the bytes are at positions \$23/\$24, the third are at \$43/\$44 and so on at \$63/\$64, \$83/\$84, \$A3/\$A4, \$C3/\$C4 or \$E3/\$E4.

These two bytes are the numbers, probably in hexadecimal, of the track and sector of what GEOS calls the INDEX TABLE for that particular file and it is in this table where the error has occurred.

When consulting the INDEX TABLE you will see something like this (it usually is in hexadecimal and the picture data for each file will probably end at differing sets of bytes):

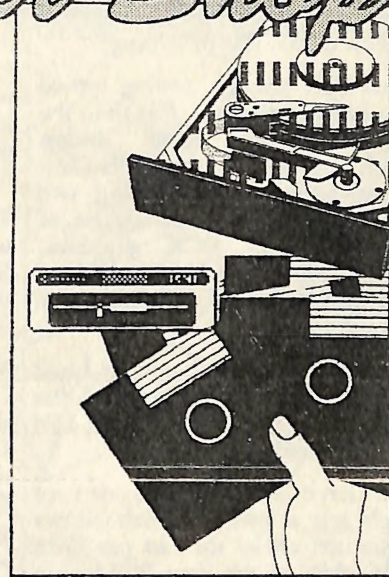
```
00: 00 FF 11 01 11 02 11 07
08: 10 01 10 05 10 08 10 0A
10: 10 0E 09 00 00 00 00 00
```

It is those two final sets of ZERO's where the problem starts. The actual picture data in this example ends at byte \$13 with \$09 00 and from there on up to and including byte \$5B GEOS requires a padding of \$00 \$FF so line \$10 should be altered to read:

```
10: 10 0E 09 00 00 FF 00 FF
18: 00 FF 00 FF 00 FF 00 FF
```

all the way to byte \$5B. The rest of the sector should be left as zeros.

Two things to watch are that you don't accidentally suppose that the zero at byte \$13 (19) above is part of the error. That pair of bytes relates to further files at track nine SECTOR ZERO. The problem starts from the byte at \$14 (20). Also, all the subsequent \$FF's must be on the odd numbered bytes or the drive will attempt to find a track



numbered 255. Happy editing!

If that isn't enough, testing turned up a further problem - this time the feedback came from Gordon Turrall, another of GeoCLUB OZ's art providers. Gordon, using two 1571's, found that in the course of converting his PCX graphics, pictures containing 'double images' were produced in the destination files.

This was a bit of a stumper as I had used this system for most of the conversions I did and nothing like that happened to me.

I do have three 1571's, one of which has a switch which allows me to use either the old pre-1988 ROM chip or the new ROM chip which the previous owner had installed. I do use this drive constantly with the new ROM chip switched in but in desperation decided to see what would happen if I switched it over to the old ROM chip. Without a doubt it was the cause of 'double imaging' as the conversion process took place. It was quite interesting to watch the

destination drive spasmodically fail to write a file to the disk; in fact I was able by counting to anticipate just which 'pages' of the GEOS graphic would be replaced by the data in the previous 'page'.

The odd thing is that it is the drive with the old ROM used as the SOURCE which causes the distortion. It behaved perfectly when used as the destination drive.

With this article I am sending to Commodore Network a public domain program from Compute's! Gazette dated July 1989. It determines the type of ROM chip in the 1541, 1571 and 1581 and does give accurate information for my collection of drives. There is a supporting article in the magazine of that date (page 51) and a further article which somewhat confuses the issue about actual part numbers in the April 1990 issue (page 17). The program recognises the ROM in the 128D as a 1571CR and the later article states that CR stands for 'cost reduced'?

Apart from what the old 1571 ROM

does to the PCX converter which is, when all is said and done, a minor problem, from what I am able to glean by looking back through magazines, it seems that the old ROM also causes bits of SEQ. files to disappear when writing to the second side of a disk under certain conditions and the drive occasionally has difficulty in accessing the directory. With all the second hand equipment on sale these days it may be just as well to know exactly what one has.

I am told that it is possible still to obtain the new ROM chips.

In conclusion my thanks to Peter Hunt for his interest and encouragement during my hassles with this program and also to Peter McGuinn and Gordon Turrall for the feedback they provided. Being something of a cynic I don't expect people to spend 45c on postage unless they want something and it is not surprising just how frequently this view is justified by non-events - with some notable exceptions.

The World of GEOS



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and Disk

The World of GEOS



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The World of GEOS



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Commodore
NETWORK
August 1995

Welcome to August's postal preamble (don't ask me what it means, I just have to write it, not understand it!). Actually, we've got so much input this month from Rod Gasson and Gaeleyn Morance that I was contemplating re-naming the column "The Gaeleyn and Rod Show".

SpeedScript

First off, from Doreen Horne of Carina in sunny Queensland comes this tome:

A query about a letter in the May '95 "LETTER'S LINK". Have you any idea what Mrs. D. Smith meant by SpeedScript "prints out over 'long'"? It is a very versatile word processor, and perhaps if she could explain her problem a little more, one of its constant users, of whom there are still several, may be able to assist her without the need for her to find and get accustomed to a new word processor.

I am not sure what Mrs Smith was referring to exactly. The only thing that comes to mind is that she was having problems with document layout (tabulation, etc.) or, perhaps, that the settings within her SpeedScript's printer 'driver' are not correct, causing the printer not to recognise certain commands. I have written to Mrs. Smith, passing on your address so that, if there is a problem, it can be corrected.

AUTHORS

Up Canberra way, and Euan Fry writes:

It was good to see the June issue of C.N. on time in spite of problems with the Disk-Coverer disks, etc. I hope you'll soon be on top of this one.

I was happy to see my RS-232 interface contribution in "Expanding Horizons" on page 17 of this issue. Unfortunately the gremlins seem to have taken out the heading, which would have told

readers the title of the piece, and who wrote it (the title was in the contents column on page 2, but I missed out on a mention among the "contributors" named on the same page). I hope that even if my name did not appear, I will still qualify for the extra issue of C.N. generously offered to authors in your editorial.

Congratulations on the third birthday -- may there be many more! A 48-page regular issue in the future would be great!

Rest assured, Euan, that despite the oversight of our omitting your name in that article, you were credited with the extra issue of C.N. on your subscription, as were all authors in that issue with the exception of those who requested otherwise. This will happen with all articles submitted to C.N. from now on. The only exceptions being for those who wish to waive such a consideration, or for those who prefer some other method of payment (i.e. specified P.D., discounts on merchandising items, etc.). Hopefully, by doing this, we will be able to attract many more contributors on a regular basis so that we can continue to expand the amount of coverage, and improve (or at least maintain) upon the already high standard of article within our pages. Personally, I think that people such as your good self, who continue to submit high-quality, readable copy for the benefit of all the readers, deserve some small reward for their efforts. All we need are a few more

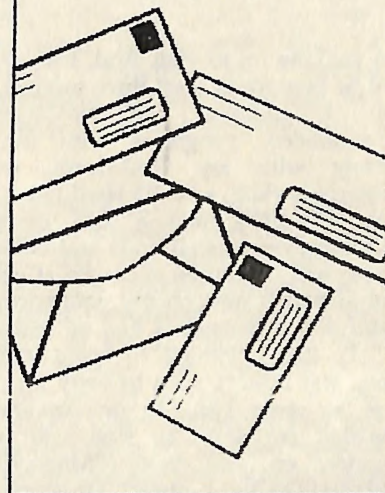
people willing to write an occasional article, or even a column, for our pages, and we won't be that far off the 48 pages or so. We've doubled the physical size of our publication over our three-year life-span, and I hope we can continue on that course in to the future.

TRAVELLING OVERSEAS

And over in South Oz, and a visitor to our shores in Gaeleyn Morance writes:

I've just finished browsing through the June 1995 issue of C.N. and feel I can answer Tim Arthur's question in "Letter's Link" concerning travelling with computer disks with some first hand knowledge, and discuss travelling with Commodore devices while I'm at it!

As you may know, I'm a US citizen visiting rod Gasson here in "sunny" (it's winter and raining) S.A. I write a monthly column in BBS Magazine for Commodore 64/128 users (just celebrated my two-year mark with the magazine, as a matter of fact), and have a telecoms column in Commodore World magazine. What you probably don't know yet, is that I'll be staying a while longer. I'll be visiting until next April, and the nice thing is that I can continue to keep my writing commitments and use the Internet



to submit my articles to the publishers in the US during the time that I'm here.

In packing up to visit Rod, I knew I'd be here for at least three months, so I brought my favourite Commodore programs with me, along with my RAMLink, its battery backup, a CMD Hard Drive, my FD-4000, and a few other Commodore related odds and ends. I too was concerned about the effect of airport X-rays on my equipment and disks. Because I had so many disks that I wanted to bring with me, and I didn't want to carry them on the plane, I finally gave up and mailed the disks to Rod with a notice on the box: "Magnetic Media! Do Not X-Ray!". Of course, since they were out of my sight I have no idea if they were X-Rayed or not, but they did arrive here in working order just a few days after I did! There were several last minute disks that I took with me on the plane. These I kept in a plastic box in my carry-bag, and whenever I had to go through an X-Ray machine, I took the disks out and put them in the bin for items NOT to go through the machine. I was informed several times that the X-Rays were not powerful enough to damage the disks, and they were probably correct, but I didn't want to take a chance. The airport security humoured me, and simply inspected the contents of the box by hand.

As to the RAMLink, FD drive, and HD, these were packed first in anti-static bags, then in plastic bubble-wrap. When I packed them into the

suitcase, I used items of clothing (sweaters/jumpers) around each of the peripherals. I made sure this suitcase was packed tightly, as I didn't want them sloshing around inside the suitcase, and used small items of clothing on all four sides as extra padding.

When I arrived here in S.A., I'm pleased to say I had absolutely no damage to my equipment due to travelling. I too was worried about temperature changes due to equipment being in my luggage, and for this reason (amongst others), I didn't try any of my equipment for 24 hours to allow for temperature changes and/or condensation to take care of itself.

For readers here in Oz wondering about travelling to the states with their equipment, I feel I should mention that I brought receipts with me so I could prove (if necessary) that the equipment was for my personal use, and when/where they were purchased. When I return to the US I'll have this as proof that the equipment was purchased before my trip. I didn't bring any of the power supplies for my equipment because the voltages and connectors used in the states are not the same as those used here in Oz. Rod provided me with a C128 and a monitor to use since the equipment here is PAL, and they use NTSC in north America.

Personally, when it comes to MY favourite programs, I've noticed very little difference between PAL and NTSC - but then again, I don't

generally run many demo type programs. My favourite programs which run pretty much the same here as they do in the US include the menu program of which you published my write-up about in CN last year (EZ-Loader), term programs, Rod's QWKRR128, The Write Stuff word processor, GEOS, The Fun Graphics Machine, and SprayPaint128.

Thanks for the input here, Gaelyne. Many people do worry about transporting their equipment overseas on occasions when they do have to spend considerable time in a foreign locale and wish to have their computer with them. Really, it's just a matter of common sense and a little pre-emptive planning when packing things.

A WIPE-OUT WHILST SURFING THE NETS

And now for the "complaints" department...

"Surfing the Nets" in the June 95 issue had a very misleading item, in the form of a message which was apparently posted in the CBM FidoNet echo's and reprinted in C.N.. The item in question was the description of new BBS software for the 64 and 128. Since the time the message was posted (20 May) until now, there has been no further discussion concerning this software. to be blunt, I don't think it exists. Since this time, the same person has

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left several other messages bashing the Commodore computers. I know it can be easy to pick up information from BBS's and the Internet for use in magazines - as a writer who writes about telecoms, I know this first hand - but I also verify details before passing info along to others. I've heard some really fantastic things about Commodore developments over time, but when I try to verify that they exist, nothing further is forthcoming. I realise that telecoms isn't your cup of tea, but I would hope that C.N. would be just as diligent in reporting the facts in this field as you are in other areas.

Admittedly, "telecoms", as you term it, is not my "cup of tea", but that does not excuse any errors, omissions, or the like. My apologies to anyone misled by the article mentioned above.

Artie's comment: The item I believe referred to was posted on a public network in reference to a (supposed) development in C= Telecommuting. I'm pleased that someone has had a comment about it. The fact that there was no substance in the original posting is a little sad, however it might (perhaps) trigger a bit of development from someone interested in seeing something come of it. Any takers?

THE WIZARD OF (SOUTH) OZ?

A little further in to Gaelyne's epic novella, and she has this to say . . .

So what's the scoop on Rod Gasson, the C128 programmer who has many times graced your pages with his Commodore knowledge and freely given opinions? To be fair, it's not easy for me to objectively describe someone I have a very close relationship with (and that's about as much info on OUR relationship I'll give in print), but I'll give it a go.

Rod's about 5' 8" (Ed's note: about 173 cm for those of us too young to remember feet and inches - which,

of course, is the majority of us (grin)), 190 lbs (13 stone 8 pound in the civilised world, or just over 86 kg for the young'uns), has blue eyes, and a long beard with a lot of grey in it (Note from Rod: "I've found the antidote for Grecian2000"). He has longish hair even though he's balding on top (Rod: I can't help it if I'm too tall for my hair). Rod repairs VCR's and Camcorders from his home business (VideoCam Services). He can usually be found in front of his C= 128 either programming or reading mail off-line. Is he as opinionated in person as he is in text? You bet, although he's soft-spoken even when giving his opinion, which has taken me by surprise more than once.

When programming for his favourite computer (the C= 128), Rod uses a cross-assembler program on the PC in conjunction with Paul Gardner-Stephen's 64Net. The time between assembling the program on the PC and testing it on the 128 is under a minute, which means he can make very small changes to the program and see the results incredibly fast. He tells me that when he was programming QWKRR128 there was a 15 minute time lag between starting the assembler and seeing the results.

Rod's latest program is called "Browser", and is "Freeware". It's a C= 128 80 column program for browsing disk directories and reading/viewing files of virtually ANY size (up to about 16 megabytes). It has paging and back-paging so that you can page back to previous text. While browsing through disk directories you can run C128 programs, read sequential files (Pet or ASCII), and view BASIC program listings with the tokenised commands colourised. For those who are involved in modeming and telecoms, Browser displays ANSI graphics and QWK style messages.dat, as well as FidoNet .PKT files. The .DAT and .PKT formats are two different methods of reading BBS messages. The .PKT format is what FidoNet BBS's use to transfer mail from one system to another, and the .DAT format is what is used when a user reads .QWK mail off-line.

The latest version of Browser is BROWSER2.SFX. although I may be just a tad biased, I feel it benefits all C-128 users, even if they aren't interested in telecoms, since it doesn't require any special equipment, and will access any disk drive type - even 1581 partitions!

BROWSER2.SFX was released about a fortnight ago, and since then, Rod has been working on adding new features to the program. Planned additions include the ability to export portions of text, and printing. The program was begun as an attempt to rebuild QWKRR128 from the ground up, allowing users to read and reply to messages of any size (among other improvements), and this continues to be Rod's primary intention.

Thanks for the run down on Rod, Gaelyne, and the info on Browser. I've already pencilled this program in for inclusion on the November Disk-Coverer 128 disk, so anyone taking that disk will be receiving a copy.

TYP0

And, just for a change, here's a bit from Rod . . .

Three years now, eh? Well done.

'course this wouldn't be a message from me without my obligatory whinge, so let's get on with it, eh?

CN - June '95, page 11 - program bytes.

There is a typo in the second paragraph which can lead to confusion. It is written "to arrive at an estimate, divide the number of blocks by four. This will give you the number of kilobytes used (true!). To produce a result in BYTES, multiply the "kilobytes" by 254" (false).

I'm sure you meant to say "multiply the BLOCKS by 254".

Caught with my pants down again. Agreed!
Sorry folks, Rod's right!

DISK-COVERER DELAYS

Rod goes on to say . . .

In regards to the delays in the Disk-Coverer disks . . . I always knew that these would be a source of trouble for you. I still reckon that these should be under a separate subscription, which could reduce your workload, reduce your costs, and maybe (wishful thinking) reduce the cost of subs for the printed mag.

Actually, since Bev has taken on the actual copying, and Doreen (Horne) and Peter (Hunt) started putting together the disks (except for the "Magazine" and "C128" versions), I've had very little to do with Disk-Coverer. This will change now that Doreen has had to give up arranging the three C64 categories, and I will have to find some extra time to organise these if no-one else volunteers their services, but the fact remains that, in recent times, I couldn't complain about Disk-Coverer taking up my time. It does remain a concern however, when there is a breakdown in production of the disks, though it now appears that we have this covered.

Cost wise, and Disk-Coverer has only added an average of around 38 cents per issue to the overall cost of producing C.N. Nevertheless, if the majority of readers wanted the disks dropped, I would have no hesitation in doing so.

PRINTING

Rod continues with

Oh yeah, the print on a few of the pages in the June issue is a little light and hard to read. I realise these things happen, but it's something to watch.

MORE "SURFING"

Still further in to Rod's letter, and he has this to say . . .

My MAJOR gripe this time though is the "Surfing The Nets" column. Gaelyne has already mentioned one of the details I was going to comment on (the one about new BBS software, which is no more than someone's dream), but my complaint is: do you really need to take up THREE PAGES of stuff grabbed from the CBM echo's. I wouldn't mind so much if what was grabbed was in some sort of theme, or followed a particular topic, but this isn't the case - it's as if someone has said "hmmm, we need three more pages for this issue" and then just logged onto the nearest BBS and downloaded three pages worth of mail. Honestly, Warren, I find this highly objectionable. When I want to read echo mail, I can log on at any time I like and read "current" mail. I find it absurd to be paying for a magazine that is simply printing two-month old echo news that hasn't even been edited, organised, or verified. I'm not saying that you shouldn't use echo clippings, heck, devote a column to it if you wish (it lets people know what they are missing by not having a modem), but three pages of "filler" isn't good enough. Take the message posted by Jim Brain - quite a nice trivia quiz - but where are the answers? C.N. can do much better than that.

Well, that's it from me for this month. In spite of all my gripes about the magazine I do still find it has more plusses than minuses, so keep up the good work.

Ouch! Not being the "author" of this particular column, I can only guess at his intention in submitting it. My guess would be that it was meant pretty much as you intimated - a collage of netmail designed to show non-modem users the wide range of information, true, false, or otherwise, available via electronic mail and the use of a modem. I can't say that I was overly impressed with the presentation

myself, but, if the idea was to give readers a "sample" of what's on line, then it could well have served a useful purpose - and excited some feedback to boot!

Arties comment: I would much rather devote three pages to paid advertising, however the main aim of the echomail was in fact to interest those not involved in the modem side of things, and to show that there is a fair bit of help and assistance available on BBS's.

If it interested one new modem user to input to the 64 Talk echo then it was quite possibly worth it.

COMMODORE FORMAT

And, from Doreen Horne of Carina in Queensland comes this offer of help

With COMMODORE FORMAT #27 in 1992 was issued a tape with ALTERNATIVE WORLD GAMES, which I had great difficulty loading from my datasette. I have now managed to get the whole game with all its tiles onto disk, complete with fastloader. If any reader in possession of the original tape would like a copy I'll be happy to provide it on receipt of the tape cover or the tape/disk tag) together with a disk and return postage. And if anyone can tell me how to climb that pole, I'll be much obliged for the information.

Have just been all the way through the JULY issue of C.N. Thanks for much of interest as usual, and particularly for the contribution by Marc Walters on page 31.

Thanks for the mention in the EDITORIAL. To keep the records straight I'd like to include as programmers the names of Don Brooke (Disk-Coverer Entertainment and Applications disks, February '95) and Will Erdmann (Entertainment, May '95).

Both programmers provided me with their programs expressly for inclusion on the Network disks.

Well, you don't get an offer like this every day, folks, so if you have the particular game Doreen mentioned above, and would like a copy on disk, write to her. This IS NOT an offer to PIRATE for you. YOU MUST have the original game AND provide proof that that is the case.

My thanks to both Don and Will for their submissions to the Disk-ware disks

WOOMBUG

Still in sunny Queensland, and Scott Roseboom writes in part...

It's been great to see the new frontiers of our 8-bit world peel back through your mag over the past year. Keep up the good work.

I have enclosed a full issue of Woombug this time. I hope you can get something from it. Like the Cockroach Turbo ROM article, em, em. Not that Woombug is a class act, but I haven't seen anything taken from it yet, that's why I ask.

In Club Links, I wonder if you might use Woombug's and other User Group newsletter covers when they enter the annual club newsletter competition. This may give some of your readers a better idea of the club newsletter being talked about and judged at the time. I hope you see my point, and, more importantly, I hope you agree!

C.N. doesn't publish very many articles taken from club newsletters for a couple of reasons as laid out below:

- Generally, articles published in club newsletters aren't quite big enough - we require a minimum number of words in most cases.

- Those people who write for their club do so because it IS their club. Unless we have permission from a writer, I hesitate to publish his/her work. It's just a case of courtesy, but it's the way I work.

- I don't use regular columns that are NOT written specifically for C.N. For instance, I have been after a columnist for "BASIC Magic" for some time, but have not used works readily available and published in club magazines. Both Peter Mead, who publishes in Woombug, and Elaine Foster, who publishes in the Melbourne club newsletter, have

demonstrated more than adequate ability/knowledge to be able to write for C.N. The reason is simple - club members don't want to read regular articles that they read in their mag last month in this month's C.N. or vice-versa.

I will carry the occasional User group article from time to time, though, based on the importance of the article, or upon a request by the group that we publish something specific (such as the Cockroach Turbo-ROM article which you so subtly hinted that you'd like published). In general, though, the main reason we acquire club newsletters is as a source of information.

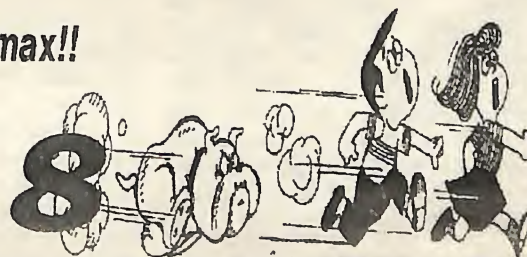
I like your idea re publishing the front covers of newsletters during the club newsletter competition. As for Woombug not being a "class act", well, all I've got to say is "who do you think you're kidding!", it's one of the best little club publications going, anywhere in the world!

64NET

And back to the "terrible twosome", and Rod Gasson once again writes . . .

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August 1995

G'day Warren,

---text quote---

Finding myself with a few minutes to spare I thought I'd pass on a few comments in regards to July '95 issue of CN.

I've had a RAMLink unit for about 4 years and the battery backup system on it has never worked. Just this week I received a letter from Mark Fellows at CMD. He says:

First up, in the GEOS column Jane states in reference to 64net "also distributed by Rod Gasson....."

"Over the last few years I have repaired RAMLinks with similar problems to yours. In each case replacing ZNR1 (a 1N5232B zener diode) on the mother board cured the problem and allowed [it] to charge up to 6.4v"

This is not strictly true. Some time ago (about 6 months) there was talk in the CBM echo's from a few people that supposedly had difficulty in getting suitable Australian funds, as a result of this I made an offer that these people could pay me via their credit card and that I would forward the funds on to Paul (no one took me up on this offer). Since then Paul has made arrangements with a USA distributor so that this original "problem" no longer exists. Although I am still prepared to help Paul out by clearing credit card transactions via my business, it is not something that we are actively encouraging.

I fitted the new diode and the current immediately went from 112mA to 160mA and the voltage from 4.79 to 6.98 volts. (Measured across the leads to the battery with battery disconnected).

If your RAMLink BBU isn't 100% this diode change may well fix it.

---end quote---

Letters Link:

Further in to Rod's letter, and we find...

I read with interest the letter from Gordon Wormald and his modification to the back-up circuitry to CMD's RamLink. Whilst I have no doubts that Gordon's modification works I feel it only fair to point out that CMD are also aware of the problem and have created their own modifications for this.....

RAMLINK & BBU FIX

From : MICHAEL KELLEY

I pulled the following message off of the Internet Usenet Newsgroups, and tried it on a friends RAMLink that we have been having trouble with for over a year.

Suffice it to say that my friends RAMLink went from 5.7 volts to 7.2 volts, and the battery came to a complete charge within 24 hours.

Before, it never went above 5.2, and even a small brownout caused problems.

We then loaded the 4 meg unit up with files, and unplugged it. 13.5 hours later, he powered the system up, and all the files were still there, intact in the RAMLink. 13.5 hours!! This is with a 6 volt, 6 amp battery.

We have ordered a 10 amp battery, and will see how well it does in the same test. He unplugged the system again, but after an addition 6 hours the data was lost. Somewhere around 5 amps, the RAMLink battery loses power quickly, and subsequently files in the unit.

If any of you have similar problems with your RAMLink, I HIGHLY recommend this fix. A 75c part and MAYBE a half hour work.

RAMLink Battery (cont.)

FROM: RidgeRunr (Michael Kelley)

(Information posted on Q-Link)

In an earlier post, GR MORANEC mentioned a part for RAMCARD II owners that would help fix improper battery recharging. I spoke to CMDDoug at Creative Micro, and the part is R49, located near the battery jack. It needs to be a 5 ohm, 1/4 watt resistor, with a 5% tolerance (gold band). Between this information and the previous post for earlier RAMLink owners, a variety of battery back up problems might get cured.

Enjoy!

Escom petition :

The forms included in CN are next to worthless and it will be a waste of time for people to send them in. Why ? Because "SIGNITURE" should be spelt "SIGNATURE" - such a glaring misspelling would probably have Escom tossing the lot into the nearest rubbish bin on account of the fact that we would be seen as little more than a bunch of illiterate hoons. :-(

Well, at least I can't take the blame for this one. This was a 'freebie' C.N. inserted for Heath in the interests of the wider Commodore community and, as such, was presented 'as is' to us, ready for reproduction. I "think" it is a slightly modified copy of either an American or possibly European petition, the only difference being Heath's address. As such, Escom is likely to find itself facing the prospect of dealing with a lot of illiterate "hoons" on a global basis

(grin!). Fortunately for Escom, illiterate or not, the money's worth the same!

Page 128 :

Whilst I agree with you that you should only use BANK#15 where possible you should have mentioned that by doing this you are forced to keep all programs and data below \$4000 (iow, your tip#1 and #2 is basically saying the same thing).

What's more, it won't be obvious to some, but by doing this you will also be limited to a mere 9k of memory for your program (36 blocks). This is reduced to zero K if a graphic command has been used because this moves the start of BASIC up to \$4000 anyway.

I realise that this whole aspect can be confusing to some, so it is not my intent to take you to task on this, on the contrary I think you did well by keeping it simple but accurate. :-)

On the same topic you mentioned that it is best to avoid POKEing the screen, especially in 80 column mode. Technically you can't poke this screen anyway. All we can do is poke data to the VDC ram via the memory locations at \$d600 and \$d601. It isn't really something to "avoid" but it is a lot more difficult to do than using the CHROUT routine. 'Course, I'm not telling you anything that you don't already know.

Other than that it was quite a good article. (just sucking up) <grin>

Keep up the good work.

The biggest problem with writing introductory or tutorial articles is knowing what to say, and what not to say. Getting it right can make all the difference between encouraging someone to "experiment", or utterly confusing them, scaring them off a given subject. I prefer to keep things as simple as possible and, with luck, I get a letter from a Rod

Gasson, Euan Fry, Gordon Wormald, or Doreen Horne offering just that little more "depth", or asking some pertinent question (never know, I might even be able to stimulate a full article out of you! ;-).

JANE'S VIEW!

And from the redoubtable Gaelyne Moranee comes this . . .

I just finished browsing the latest Commodore Network and have a few comments to share with you. Yes, Rod and I do share this same habit, but he'll send Email with his particular comments separately.

First of all, Jane Voskamp-Jones has my understanding in regards to her column versus her books. It's hard to "ride the fence" and please both beginners and experienced users. By laying it on the line that she won't repeat information from her books in her column, she has made her intentions clear. This isn't an easy thing to do, and I respect her for making this decision a public one.

As to the choice of GEOS articles, I personally enjoy all three groups - beginner, intermediate and advanced. I find myself in any of these categories depending on the project or GEOS application I'm using. Having different writers in is always a treat, as one writer may go after a subject in a completely different approach from another.

I too feel it is important for Jane to separate her handbooks from the articles published within C.N. They are important works in their own right, and as such, deserve the support of those Commodore users interested in them. It is also important to have a "mix" of writers on any given subject for exactly those reasons you outlined above. Just because Jane writes a GEOS column for C.N. doesn't mean that other GEOS-oriented submissions are verboten. Quite the opposite, I'd like to see many more

submitted, and that goes for any subject pertinent to commodore 64/128 computers.

INTERESTING?

Sometimes it's quite interesting to read a magazine and then realise that what isn't said can be just as interesting as what is said within the pages. The high content of LoadStar and LoadStar related material, ads, comments from Fender Tucker, etc. were noted, and aside from an advert for all three magazines (Commodore Network, Commodore World and Commodore CEE), the inclusion of Jack Vander White's name as the USA Publisher, and the Alive! Clip Art collection advertised on the back page, I found very little content about Commodore CEE. As you know, I no longer edit the disk magazine which used to be CEE-64 Alive!, but I am proud of the effort I put into it, and hope to see the new magazine (which I am not in anyway associated with) do well. It took me by surprise that there was so little comment about Commodore CEE in this or recent issues.

There's a simple answer for this one, Gaelyne. We simply haven't got much to say about Commodore Cee at the moment. I am still very proud to be associated with this excellent publication, and intend to work along side Jack for as long as possible in promoting it in Australasia. Since nothing much has happened for several months, there's not much news for the readers, and hence the lack of coverage. Sure, we've come to arrangements regarding several product lines, but, until things have been received at this end, it's a little unfair to announce things to the readers (I've been caught out before with this, though not with Jack). Hopefully some good news will be forthcoming shortly! Before I pass on to the next segment, it must be remembered that the "Unabomber" scare has had a BIG effect on postal services in the U.S., specifically California.

MARC'S ARTICLE

Further in to Gaele's letter, and she says ...

Kinda on the same topic, I would love to see the Publications article by Marc Walters, which listed past and current Commodore paper magazines expanded to include disk magazines. Should you run it again, if you would kindly add to the legend: (ss) = A small but well written, more than single page 64/128 column buried in the middle of a fairly decent non-computer specific magazine.

And under the "United States" list: "BBS Magazine" (ss) I'd very much appreciate it.

Oh, and just a minor detail, but this particular article would have been much easier to read if it were left justified. :-)

I think we can arrange that for future instalments of that particular listing. One thing I'm sure several of our readers may want to know is how and where do you get "BBS Magazine". Furthermore, and realising that you are a writer for this magazine, is there any chance of getting a review or review copy of it for a possible future article in C.N.?

Artie's comment: As a regular reader of BBS magazine I can tell you that it's available at good newsagents in Australia for \$9.50 (not the cheapest publication around) If they don't have it, ask for it. Distributed in Australia by NDD (Newsagent Direct Distribution).

BTW I agree on the aspect of left justification of the magazine listing, in retrospect. I just adjusted it in my master page, and it looked far better. Appreciate the comment.

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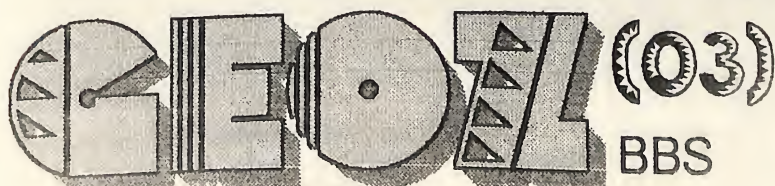
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Once again, welcome back for another month. This time I will present you with a review of a text/graphics adventure game. Let's get the review under way

THE HOUSE

The plot of this adventure game goes something like this: Your Aunt, having no other relatives, left her fortune to you in her will. However, as she hated you so much, she has left the money to you on one condition you must search her house for it.

The scene is set for a challenge, but your aunt did hate you

Once the game has loaded you are thrown straight into the proceedings.

The top 2/3 of the screen includes a graphical representation of your location. The lower third of the screen is where the adventurer is able to perform actions, via a joystick plugged into control port #2. In essence, it is the games "control panel."

This panel is divided into three columns. The first includes a selection of icons which enable the adventurer to string commands together (see P1). To the right of these icons is the direction compass. Movement throughout the adventure is limited to the four cardinal directions: North, South, East and West. Clicking the pointer on one of the arrows moves the adventurer in that direction

(providing, of course, that an exit in that direction exists).

The second column in the panel lists the items presently held by the adventurer (yes, it is their inventory). The third column lists the items in the adventurer's present location, which can be manipulated through joint use with the icons..

P1 - The icons present, and what they represent:

ICON	COMMAND
Eye.....	View
Hand.....	Take
Handgripping item.....	Use
Open Door.....	Open
Closed Door.....	Close
Man Pushing Box.....	Move
Switch Labelled on.....	On
Switch Labelled off.....	Off

Other features of the control panel include arrows to scroll the text within the columns up or down. This is useful because there may, for example, be more in a location than can be displayed in the column at the one time.

My first few attempts at this adventure were very frustrating. The reason? The arrows "blend" into the control panel's border, and I was unable to see them, as a result, my options were limited. But you won't have that problem now that I've told you, will you? If you do, make an appointment with an optician

The last feature in the control panel is a small grey disk in the bottom left corner. Clicking this brings up the save/load/restart game menu.

Four default save positions exist, and can be written over if desired.

A small strip above the "control panel" displays all the messages. If they are lengthy (and let's face it, with a message area of 40 characters, they are bound to be;) then by pressing fire you can view the continuation of the message. The method of constructing commands is obvious, however I'll say a few quick words. The icons (verbs) need to be matched with either an item in the inventory or a location (i.e. use Acid with Zinc Cup). An appropriate sound track is heard throughout the adventure, with spooky spot effects adding a little extra atmosphere. Music changes as the adventurer makes his progress, also add to variety in this area.

The graphics accompanying each location are very well drawn. Various Perspectives have been used, along with shading. The overall attention to detail is high.

Presentation wise, "The house" is pretty much faultless. I'd almost go as far as to say that this adventure could easily be mistaken for an IBM or Amiga production.

A few gripes, however. The adventure deals with some standard situations offensively (through the use of expletives). This is a let-down, and out of character with what is a classy production. A few minor spelling errors exist, such as the response to "open window" - "it stocks a bit". Along similar lines is the message "there's a crotch" when a branch appears. These small instances aside, I haven't found anything else worth complaining of.

As you've probably gathered after reading this review, I'm impressed by "The House". It's very refreshing to see an adventure game of this quality appear in this era of the C64. "The House" is a fine example of the on-going commitment to the Commodore 64, and a sign that there's a lot of hope for the future.

An ideal purchase for those who enjoy such games, or are yet to be introduced to them.

AVAILABILITY: "The House" is available from Alternative Software, RMB 221, Sunraysia Hwy., Stuart Mill, Vic., 3478.

Ask for adventure disk 25 and enclose a cheque or money order (payable to HEATH KIRBY MILLER) for \$4.00. Postage is already included in the price.

WINDING DOWN

Yes, unfortunately I'm almost out of space again. I hope you've enjoyed this month's column. If you have anything to say, or any questions relating to adventure or role playing games, the address to write to is:

**RMB 221,
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*Warren
Naismith*

MULTI-TASKING - A DISCUSSION

One of today's most common buzz-words is "multi-tasking", that magical, almost mystical ability to handle more than a single program at a time on your computer. Of course, we all realise that such an implementation is impossible on any computer as small as a 128 - or is it!

In fact it is far from impossible, even in 64 mode. All we need to do is realise a few basic facts.

THE CONCEPT

The first thing to be realised is that multi-tasking IS NOT a case of running several programs simultaneously. What the computer is actually doing is creating the ILLUSION that it is working on more than one task at any given time.

It does this by "sharing" out CPU time in equal amounts to each program being implemented. It doesn't matter exactly where within the program the CPU is, it stops, saves any relevant data regarding where the CPU has got to, changed variables, etc., etc., and then proceeds to the next program where it begins afresh. Once the pre-defined limit is reached, the CPU performs the same tasks as with program #1 and moves on to the third, and so on down the line. Once the last program has been worked with, the CPU transfers operation back to the first program where it begins where it left off by accessing the data it saved previously. Have a look at

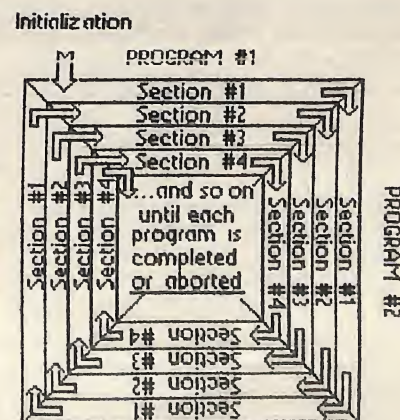
the diagram below and hopefully this will help you to visualise the concept.

THEORISING ON IMPLEMENTATION

What we have above is an outline of the concept of practical multi-tasking on a single CPU system. As you well know, our 128 has TWO CPU's, the 8502 (for 64 and 128 native mode), and the Z80 (for CP/M). I have no doubt that a form of multi-tasking can be implemented by utilising both chips, and that may well be the basis of a further article. For the moment though, we'll concentrate on the 8502 and single CPU multitasking.

In order to effectively multi-task, several questions need be addressed.

1) How do we implement several programs running (almost) simultaneously without each



PROGRAM #3

**Commodore
NETWORK**
August 1995

impinging on memory used by others or creating havoc with the system stack?

2) Possible problems with a program's trying to access to the configuration register and KERNAL routines

3) How does the CPU know when and how to "swap" between programs?

4) Should multi-tasking deal with both ML and BASIC programs or only one type?

5) Interrupt handling

The short answer to MOST of the above problems lays with the creation of an "Operating System" to handle all tasks associated with multi-tasking. It would provide ALL routines required for the operation and access to all hardware, including the computer's RAM and KERNAL. It would also tell the CPU when a swap is necessary between programs. Another necessary feature of the Operating System would be the user interface. This must provide a facility to accept and process commands as entered by the user. Anyhow, let's look at each of the above questions in turn and try and provide a few alternatives for you to consider.

Answer 1) - Part of the answer here may be to have each program equipped with its own page 0 and page 1 of memory. These pages are special, and the only ones we need to consider for this special treatment. Now, to stop programs from "crossing the line" and using memory locations used by the other routines for their own purposes, we should ensure that all memory locations accessed are located between the programs start and end addresses. Admittedly, there will be instances where a program will need to use locations outside of its domain (e.g. writing to screen)

Answer 2) - A well designed Operating System.

Answer 3) - There are two methods of determining when is the best time to "swap" programs in a multi-tasking environ. The first requires the interpretation of every instruction within a program, allowing control over each of the programs to be used within the environment, and preventing anything "nasty" occurring. Doing

all this requires considerably more code than that required in the second option.

The second choice available is to use interrupts, a far more efficient (and faster) way of doing things. Unfortunately, there is no "safety net" with this method, so if anything goes wrong, it's bad luck, Charlie!

Answer 4) - Multi-tasking should be quite at home with either BASIC or ML programs if designed right, but there are a few things to consider. Whereas BASIC programs are quite alright on the 64, in 128 mode we encounter a small problem. The 128 uses a lot more locations during the course of running a BASIC routine to keep track of things than a 64, and, as a result, when we come to "switch" between programs, we have all the more information to save before we can move on. This would mean a noticeable delay in operations (one answer to this is to move to two Meg mode, thus blanking the screen). Therefore it may be best to use only M.L. in 128 mode, whilst in 64 mode you can utilise either.

Answer 5) - Simple answer - don't use interrupts, except in the Operating System.

MEMORY

Available memory will always be a consideration when trying to implement a multi-tasking system. For a start, in order to multi-task you will need at least two programs in memory, not to mention an operating system. Therefore, it is imperative that an effective means of memory management is implemented to avoid overwriting. We must ensure that we manage to keep track of what memory is in use. Therefore all memory locations apart from the zero page and page one must be contained within the program block so that all memory in use is known to the Operating System (we'll call it the O/S from now on!). Next, we must provide a routine to allow relocation of a program in memory to an address more suitable as necessary. This will enable programs to be moved around in memory as required, depending on the configuration of programs being used within our multi-tasking operation.

OTHER CONSIDERATIONS

What we have covered so far are only broad considerations. There are quite a few secondary problems which must be dealt with in time. Some of these are as follows:

- BRK command - what is the procedure if one is encountered during a program's execution. Probably the most painless alternative is to remove the program concerned from memory thus leaving the operating system to continue on with the other programs being manipulated. If only a single routine is in operation, however, the processor must have the ability to return to some sort of code after the interrupt is completed so it is therefore returned to loop within the initialisation routine.

- Program information - our O/S will need some sort of information about the programs we will be using, like the program's name, where it's page 0 and 1 are located, and, indeed, where the program itself is located in memory. Probably the best solution here is the implementation of a program table. This should not be static, but should be "built" over time utilising available storage and linking entries. Searches can be performed through this table in the usual manner. This method has the added advantage of allowing virtually limitless tables to be compiled.

- Commands - what commands do we require to be available via the O/S, and how do we inform the system that we are about to issue a direct command. Probably the most necessary commands will be RUN, LOAD, and STOP (to abort and remove program from the system), though we could consider others like LOAD & RUN, HALT (to suspend operations mid-stream, either temporarily removing the program from the operations loop, or just suspending all operations so that we can perform some other necessary task - this would leave our program/s in memory, but the CPU is not processing the logic), and SHOW (to list all programs currently installed). In order to issue commands, we will need some way of signalling our intent. This could be done in a number of

ways, including the issuing of an NMI interrupt via a press of the <RESTORE> key.

- Inter-program communication - depending on what you wish to run under a multi-tasking environ, you may wish to have a communications protocol between several programs being run simultaneously. This would allow the free exchange of data and would require READ and WRITE commands be added to the O/S.

POSSIBLE PROBLEMS

Two obvious problems that will be encountered in multi-tasking are lack of memory space, and memory fragmentation. The first of these is probably best dealt with by using a "chained" or "linked" program table as described a little earlier. This means a re-write of the entire logic table and would require complicated logic.

The second problem of the two, memory fragmentation, is the bigger problem. the two most obvious ways around are:

a) Concatenating blocks of memory into contiguous areas of memory. Blocks of memory could be moved as required, with any actual program code requiring relocation. This is time-consuming.

b) "Paging out" - Far more complicated in practice, but based on the simple fact that all programs, when running, operate on only a single command at a time, with access to only one memory location (apart from that instruction) at any given time. The rest of memory is unnecessary. With this understood, whole blocks of memory could be placed on disk (or in an REU preferably) until required, and loaded in as needed. With this method, programs could be used that could be fragmented throughout memory. It IS complicated, but it IS possible, just like simple multi-tasking on the 128.

Warren
Naismith

Much like the data handling we covered last month, disk access is often something that remains a mystery long in to a programmer's programming life. But, really, it is not all that complicated, and can be a heck of a lot of fun. This month, I am going to give you all you need for the basis of a disk editing program to be written in BASIC. A little scary, eh? Well, read on, you might be pleasantly surprised at just how simple it is!

A LITTLE BACKGROUND

Many people do not realise that our standard Commodore 64/1541 system is actually TWO computers. This is because our drive is actually a full-fledged self-contained computer system in its own right. It utilises a 6502 processor, has 16 KB of ROM (Read Only Memory) to hold all the instruction codes needed for its successful operation, an additional two KB of RAM (expandable, but we'll deal with that in a later article in Expanding Horizons), and two I/O (Input/Output) chips to perform all necessary Input/Output functions like drive motor control, movement of the read/write head, or the transfer of data.

Commodore designed their drives this way in order not to tie up huge chunks of the limited memory available within the C64 with the DOS (Disk Operating System) or Operating System that would otherwise be necessary if utilising a disk drive with our computer. With the drive being largely self-

contained, all our 64 has to do is remember a few commands to enable it to communicate with its rather intelligent peripheral.

AN 'OPEN' DISCUSSION

The key to talking to our drive/s (as with any other peripheral), is the 'OPEN' command. Now, we can use this in one of two ways to transfer data in this instance. Firstly, we can use it to WRITE to disk by issuing an OPEN command followed by a PRIN1#A to actually write the data. The 'X' can be any valid file number within the range of from one to 255. It should be noted that by using a file number higher than 127, you will cause a linefeed to be transmitted after every carriage return via the PRIN1# command. An OPEN command MUST be issued before a disk file can be accessed for the first time.

Here is the format for proper use of 'OPEN':

OPEN N, D, S, "Dr:filename, T, A"
where:

N = file Number
D = Device number (usually 8)
S = Secondary address
Dr = Drive number
T = file Type
A = Action to be performed

OK, now let's look at what each of the above parameters actually means in terms of effect on the OPEN command.

N - File Number - this is used by the file access commands to determine exactly which file is to



```

1 GOTO 50
2 WAIT R, V : : :
POKE S, Z + P: PC
A: ON P GOTO 2, 2
5 WAIT R, V: P =
(O): PRINT A$;: C
D: ON X GOTO 2
30 POKE S, PEEK
50 PRINT "[CLEAR]"
GOSUB 80: CLR: PR
1.160: D = .001
60 R = 53265: V =
O = 49152: A = 1:
= 200: C = 1063:
CHR$ (20)
70 GOSUB 105: GOT
80 D = 49152: N =
10: D = 1024:

```


be worked with. If you try to open a new file with the same file number as one previously opened, an error will occur. Each file **MUST** have a **UNIQUE** number so that the computer knows exactly where to send its data.

D - Device Number - pretty self explanatory. Will range in value from 8 through to 11 and indicates the drive you are to use.

S - Secondary Address - signals the device to perform a desired function. On Commodore printers, this is often used to change print modes and the like. During file access, values of two through to fourteen are commonly used. Zero and one are preserved by the computer for program **LOAD** and **SAVE** operations, and fifteen is utilised to talk directly to the drive's internal computer.

Dr - Drive Number - this can be either a zero or a one. A reminder of the days of dual drives, where such machines only had one device number and the computer needed some way of differentiating between the two drives. This number can be omitted (along with the colon) for 1541 operations. If the colon is preceded by an '@', the file is being opened for writing. New data will be written to an old file, destroying the information previously stored.

T - File Type - pretty much self-explanatory. Must be either an 'S', 'P', or 'U', standing for Sequential, Program, or User file type. Relative files are completely different, and require a more complex form of access and are therefore not dealt with here.

A - Action - this must hold either an 'R', 'W', or 'A' to indicate the following operations:

R - Read a file

W - Write a file - destroys all previous data

A - Append (add) to a file - connects new information to the end of a current file.

In the above discussion, we have been dealing with the opening and with working with specific files on disk. However, **OPEN** also has another ability, and that is to communicate directly with our drive. We can perform several very necessary functions using **OPEN** in this fashion, and, I dare say that

most of you would be more familiar with this usage of the command. Such actions as format, validate, etc. utilise this form. The format for the command in this case is:

OPEN N, D, 15

with 'N' and 'D' having the same meanings as previously. The secondary address of 15 informs the drive of an incoming 'direct' command. If you are not familiar with this form of **OPEN** then you should refer to your drive manual.

USING OPEN WITHIN A PROGRAM

When using the **OPEN** command within a program, a few simple procedures should be adhered to.

a) Always open file 15 early in your program, and open it only **ONCE!**. Once it is open, it is available whenever we need to issue a disk command at any stage during the duration of the program.

b) Similarly, close file 15 at the end of your program after all others have been closed. We have to do it this way because closing the command channel will automatically close all other files, so it is best left open until all possible use for it has passed, hence it's being left open until the very end of the program.

c) If your **BASIC** program comes up with an error whilst files are open, it will abort them, leaving them unclosed. In this instance, you should **ALWAYS** close them properly with:

OPEN 15,8,15: CLOSE 15

If you do not follow this procedure you run the risk of losing an entire file or files.

MORE DRIVE COMMANDS

Now that we have sampled the waters with the **OPEN** command, let's dive in a little deeper and look at disk errors and error recovery. In fact, why stop there? I am going to give you a couple of small routines that should give you the basis of creating your own disk monitor/editor. All you will need to do is design your own display screen layout and add a few handling routines as desired. I do hope a few of you take on the challenge, I think you'll be a little

surprised at just how easy it is! One thing I will say, though. Make yourself up a "laboratory" disk - something to experiment on so that, if things go wrong, you won't have lost too much. All I do is make a whole-disk copy of a full (or nearly-full) disk. It doesn't matter what's on it, as long as there's data to play around with. It probably wouldn't even matter if it was blank - I just like a disk with plenty of data on it!

DISK ERROR!

Let's get down to business.

Whenever a write operation is performed, our drive automatically reads the written data back from each block as it is written to verify its accuracy. If a mismatch is detected, it performs the read again. This happens a maximum of five times, at which stage the drive reports an error.

In order to ascertain if there has been a mismatch in data, the drive creates a "checksum" when our information is first written to the disk. It does this by reading all bytes in the current section of disk, adds them together, and divides the result, leaving the 16 leftmost binary digits which, when calculated, give a result of between 0 and 255. This is stored alongside the data in each particular block.

When we go to read any information back from a disk, a new checksum is calculated and compared with that on disk. If they match, good and well, if not, then we have a checksum error. Our drive will read and compare checksums up to five times before it reports an error, just to make sure it hasn't made a mistake. The most common error you will encounter should be Error #23, which is the drive's way of telling you that it has performed the above check, and the comparison has failed to match.

In order to recover from an error #23, we will need access to the original data block and to load it in to memory and then to re-save back to disk. This should correct the error if it was caused due to a faulty checksum byte or a corrupt data byte, however, once performed, it would be smart to copy your files to another disk just in case the fault lay with the original disk.

ACCESS TO DATA

To you and I an error #23 means that we have no access to the data on disk normally, but that need not necessarily be the case. In order to be able to tell us that there IS a checksum error, our drive MUST be able to access the data, and therefore so should we be able to!

In fact we can, and, with the use of a few judicious commands, we can achieve some very interesting results.

The first of these oft-unknown, and more often ignored commands is BLOCK READ. This tells our drive to read a specified sector on a certain track into memory where it can then be accessed and manipulated. To do this, we must tell the drive to reserve a part of memory for the exclusive use of this command, and, to achieve this we need to OPEN (sound familiar?) a drive 'buffer' thusly:

OPEN 15, 8, 15 - to open our command channel (to send our commands a little later on)

OPEN 2, 8, 2, "#" - to open a buffer

The "hash" is used to tell our drive to look for the FIRST available buffer and to reserve it as file #2. All very well, but let's put that to some practical use to demonstrate it a little better. Here's a short routine:

```
10 OPEN 15, 8, 15: REM Open
command channel
20 OPEN 2, 8, 2, "#": REM open
the buffer
30 PRINT #15, "U1:" 2; 0; 18;
1: REM 'U1' substitutes for
the BLOCK-READ command
40 GET #2, A$: IF A$ = " "
THEN A$ = CHR$(0): REM reads
a byte of data from the buffer
50 PRINT A$: REM print the
character to screen, including
cursor codes and certain
character codes which won't
print properly.
60 IF ST = 0 THEN 40: REM ST
is the STATUS variable.
Informs us of the status of
the last operation. If it does
not hold a 0 then an error
will occur or you have reached
the end of that block of data.
70 CLOSE 2: CLOSE 15: REM
closes files #2 and #15
```

Now, needless to say, you won't need to type in the REM statements, the colons immediately before them, or anything following them. These are only there so you can follow what is going on.

Line #40 bears some further explanation. This line reads a single byte from the buffer and, if a byte is not received back, A\$ is assigned a value of 0. This is done because the 64 will not recognise an ASCII value of zero within data.

To understand the above routine a little better, it would be nice to know exactly what it does, wouldn't it? Well, it actually reads in the first block of data from the disk's directory in to drive memory from where it will be transferred byte by byte into the computer's memory for display on screen. Unfortunately, there are quite a few values that will just not print to screen, so you can alter line 50 slightly if you wish. Try PRINT ASC(A); A\$. This will result in both the character number and the character itself being presented. Of course, both the 'T' (track) and 'S' (sector) values can be altered to suite your needs within the constraints of disk layout to any value from one to 35 for the track, and, depending on which track you are on, between zero and a value over sixteen and under twenty for the sector. By altering these track/sector parameters, it is possible to examine your disk one block at a time. So how hard's that? With seven lines of code, you've got the beginnings of your very own Track & Sector Editor!

OK, so we can read! What good's that unless you can make an alteration or two? Well, we can! All we need do is utilise the BLOCK-WRITE command which is very similar to the BLOCK-READ command in many ways. Here's a routine that will write 256 "X"s to disk (who said you never see any useful routines in magazine's any more?).

```
10 OPEN 15, 8, 15
20 OPEN 2, 8, 2, "#":
30 FOR I = 1 TO 256
40 PRINT #2, "X";
50 NEXT I
60 PRINT #15, "U2:" 2; 0; 1; 1
70 CLOSE 2: CLOSE 15
```

Notice the similarities? Except for the FOR/NEXT loop, and the fact that we use a "U2" command (which is short for BLOCK-WRITE), there's not a huge amount of difference between reading and writing routines is there?

MORE ON BLOCK-READ/WRITE OPERATIONS

Before we finish for this month, perhaps it would be better to explain a little something about the BLOCK-READ and BLOCK-WRITE commands. By using the commands "U1" and "U2", we are not using the true BLOCK-READ/WRITE commands but a far "coarser" version of them. By "coarser" I mean that they are incapable of the finesse associated with, and therefore the complexity of operation of, the original commands. Users can use the "true" BLOCK-READ/WRITE commands if they so wish, it is simply a matter of using "B-W" instead of "U2", and "B-R" instead of "U1". However, if you intend to use these, a few facts must be explained, and a few conventions adhered to.

a) the format for a BLOCK-READ or BLOCK-WRITE command MUST be as follows:

PRINT #15, "B-R"; C; D; T; S - note that "B-W" should replace "B-R" if you wish to write to disk.

where C is the command channel that was specified when the file in to which the block to be read was opened, D is the drive number (always 0 on a 1541), T is the relevant track to be accessed, and S is the particular sector to look at.

b) In true BLOCK-READ/WRITE operations, the first byte of a sector is used to determine the number of bytes within that sector that have to be read into, or written from, the buffer. Therefore the first byte is always interpreted as not being part of the data

My recommendation is that you ignore these commands in favour of the U1/2 combination at least initially. They are extremely powerful and require a little experience to be used properly.



What is a Cockroach Turbo ROM?

It is a Kernal ROM enhancement / upgrade chip replacement for your 64-64C-128-128D (The Turbo ROM only works in 64 mode on the 128, all else is unaffected.). If you consider the intended operation of the range of the Commodore 8-bit computer ROM's, then this turbo ROM for our 8-biters is really two chips in one. All the features of the latest version of the Commodore Kernal ROM first has to be available. Then secondly all the extended routines also have to be there too, cohabiting peacefully together. All original DOS has to be usable as well as a extended DOS while in turbo mode. The chip also has to be able to run as a completely standard chip just in case of any incompatibility of the extended DOS and software.

What can a Cockroach Turbo ROM do for me?

This is a difficult question to answer because everyone has different needs for their computer. But if we look at the Cockroach Turbo ROM from a performance angle we can immediately see two major areas of improved performance on the standard Commodore ROM.

1. A greatly increased DATA access speed. (Your drive works much faster. In this case up to 600% faster.)
2. A substantial increase in user operation ease and speed. (Mainly due to the simplified and extended

Cockroach Turbo ROM's

set of DOS commands that make for shortcutting keystrokes and the built-in Utility Wedge.)

What won't it do?

As the maker says, "It makes a lousy cup of coffee". But in the software department, it is very docile and will almost LOAD everything. This includes programs with their own in-built fastLOAD systems. If you come across any software that is incompatible, its just a flick of a switch and ZAP, your back to standard form.

Because of design restrictions speed access to REL and SEQ file are unaffected. But with normal program files of 200 BLOCKS LOADING time is cut from 127 seconds to just 21 seconds. If the file is also saved with a COCKROACH (because of Cockroach's modified sector pattern) the LOADING time will be even faster.

How can I get it?

That's easy, just write to:

Woombug
P.O. Box 213
Woombye
QLD, 4559.

The cost is \$50, each unit. (Fitting is FREE to Woombug members) Or for \$22 (+ postage) Woombug can fit it for you and on top you will receive 12 months of Woombug subscription FREE.

Scott Roseboom

Now that I have my new Cockroach what's next?

The Cockroach Turbo ROM announces itself with a distinctive screen, "COCKROACH TURBO 38911 BASIC BYTES FREE". Then your off to rediscover your Commodore capabilities. The first thing to remember is that the Cockroach will always access drive no' 8 (unless you use command @"#". See command summary.) so the ",8" is no longer needed when using any DOS command.

Below is a summary of the extended commands.

*~RETURN~	LOADs the first program on the disk. (just great for use frontend programs.)
@\$	LOAD and LIST the Directory (inc. "#" BLOCKS FREE. This command can also be used with "?" and parts of file names when searching the directory for strings of similarly named files. "?" can be used as a Wildcard and the "*" is a "don't care." would list all files on the disk named: "<wildcard> TEST <whatever>")
@\$? TEST "	
<SHIFT>+<RUNSTOP>	When the cursor is placed on the first character of a file line in a Directory "LOAD" FILE NAME ",8,1 will automatically appear. Just press <SPACE> to delete ",1". When SAVEing Cockroach first checks if there is enough room on the disk. If there is not enough room the command is aborted, the error light on the drive will flash and a "FILE TOO LARGE ERROR" will appear. This will save you from the dreaded splat files.
@	Reads the disk error channel.
@I	Initialises the disk drive.
@V	Validates the disk in use.
@S:Filename	-Scratch (erase) that file.
@R:Newname=Oldname	Changes file names.
@N:	Will format a new disk as in the usual way, or on a used disk clears out the directory track only
@F:	Does a fast new format/erase, format and verify in 30 seconds.
@*#	-Changes the default drive to another drive other than device 8. e.g. @9 <RETURN> would change the default drive to device 9. The first drive, no. 8 can still be active but standard DOS will have to be used to access it until you wish to revert by using the @8 command.
C=/F7	To get a low RES screen dump. Great for dumping short text messages to the printer.
@P	Any further screen output will go to the printer. If you type @P LIST the program list in memory will go to the printer.
@O	Will deselect the printer output and reselect screen output.
ZAP	Is a cold restart. Same as SYS 64738.
OLD	Will restore a BASIC program after a reset or an accidental NEW.
MON	Has been provided to link to machine code monitors.
@UJ	Default drive reset.

A "Compleat" Triplet

This month we review three of the "Compleat" sets recently released by Loadstar and being made available here in Australia through JDB Software. For those of you who missed last month's premier review of a set from this series, we reviewed "The Compleat Walt" (yes, the spelling IS correct!). This is a collection of graphics created by Walt Harned and published on the Loadstar disks over several years.

This issue we look at "The Compleat Dave" and "The Compleat Roger", worthy companions to the above collection. Instead of graphics this time around though, we are looking at a collection of SID music and a selection of quiz programs for trivia buffs.

The Compleat Dave

This collection consists of six disk sides containing something over 250 individual pieces of SID music transcribed by one Dave Marquis. Each disk in the set (six disk sides in all) carries the program "Music Star" as the "player" for the music files presented.

The music presented is all over 50 years old, so if you are a real cool dude like me, and you follow modern musical trends (Abba, John Denver, Tom Jones - you know, the really BIG names!) you are likely to be a little disappointed. In fact, I'm so up-to-date with modern music, that I think "Pearl Jam" is some odd culinary treat!

Enough of that. It is true that the music presented is not modern, but this was done to avoid breaking copyright (American copyright runs out after 50 years, at which point it must be either renewed or declared in the public domain as I understand it!). This does not detract from the collection itself, especially if, like me, you number the "classics" amongst the greatest musical creations of all times. But the collection is not just classical music. In fact a very large proportion of it is devoted to other music types in the form of ragtime, light opera, marches, traditional dances, and polkas. Once again, many of these may not be every-ones cup of tea - I'm not a great ragtime, march, or polka fan myself, but the richness of musical

variety adds spice to this collection and allows those of us whose musical taste changes with our moods a great variety of choice.

"The Compleat Dave" even includes two "Multi-Media" events in "The Four Seasons" and "Peter and the Wolf". These combine the excellent graphics of Walt Harned and a story line presented as text below each graphic, with Dave's music.

However, I was a little disappointed in one aspect of this collection. Having an already sizeable collection of SID music, many of which have associated .WDS files, I have come to enjoy singing along to the music as it plays and the associated lyrics are displayed on-screen. Of course, this only occurs when I have ensured that the house IS empty, although that doesn't stop certain neighbours from implying that the RSPCA ought to be told about the cat I am torturing (they've all got tin ears!). On reflection, it is true that very little of the music presented here is suitable for a "sing-a-long" session (I'm not much good with Gilbert and Sullivan, though the Christmas carols might have been interesting!), so maybe, that's something we'll see from Dave in the future. I hope so!

If you enjoy SID music, this is an excellent offering.

The Compleat Roger

If you are like me, you like nothing better than a challenge, and quizzes are right up my street. So, it was with great anticipation that I began

my exploration of this pair of disks (four disk sides) put out by LOADSTAR and containing some 25 programs written by Roger Norton, their resident trivia expert.

Subjects covered range from American history and geography, through to English language spelling and syntax, world capitals, history, and population, through to "who sang this" and "who wrote that" type of quizzes.

All the programs are "multiple choice", with a question being presented and a number of selections being offered from which to choose the right answer. In most, if not all cases, the user has the option of having the correct answer displayed once an incorrect response has been entered, or not.

It was extremely interesting to note from the text file introducing the set, that Roger Norton was a teacher (now retired), and, in the course of his work, used the creation of these quiz programs as a tool to encourage his students to carry out the exhaustive research that has obviously gone in to the compilation of information used in these files.

The obvious influence of an educator is apparent in each of these programs, with the ability to have them utilised as educational tools self-evident. The several "Parsin' Practice" type quizzes are especially note-worthy in this regard, despite the Americanised spelling of some words. In this series of four quizzes, Roger deals with analysing sentences in terms



of grammar, offering an invaluable learning aid for those learning to come to grips with the peculiarities of the written and spoken word.

On a lighter note, I had a tremendous time with a couple of friends "discussing" the pros and cons of Conway Twitty having sung "Smoke on the Water" and voicing our opinions on just who did sing "Teen angel" (was it Paul Anka or Freddie Fender? - or neither?) during the running of the "Who Wrote 'Teen Angel'?" quiz.

On the flip side, though, I did find the quizzes terribly "American" in most cases. This is not a put down, it's just natural that Americans are going to be more familiar with American ideas, society, history, and geography. I'm sure an Australian quiz about the length of the Murray River, or Prime Ministers of Australia would be quite out of place in America. Of course, the saving grace is that, on the whole, Australians know considerably more about the U.S. of A. than their American counterparts know about the land of Oz, so I guess we can't grizzle too much!

All in all, an excellent series of quizzes, which, I dare say, everyone will find challenging and rewarding. You will need to really know your stuff on some of these!

The Compleat Maurice

The last in this month's "Compleat Triplet" review, this is by no means least! If there is one thing a

computer can do well, it's to simulate card games, more especially, solitaire card games, and no-one (and I do mean NO-ONE!) can do it better than this man, Maurice Jones!

This collection consists of two disks packed with some 27 individual games for the card freak. It starts off with some of Maurice's first efforts and provides a visual history from then to the present day of how he has improved upon presentation and programming during that time.

Presentation is excellent, especially on the more recent offerings, and game play is smooth and, once you've taken a little time to read the associated instruction files for each, straightforward. A continuity exists between games where Maurice has tried to maintain a similar "feel" throughout. Thus, when you play one, you have a general idea of how the next will play as regards to input controls and the like. This does not negate the need to read your instructions though, as each game, whilst generally utilising the same keys, has its own particular set of rules, and thus elicits a peculiar response to any particular key press.

But aside from that, these games are GOOD! In fact, several of these have been directly responsible for more than a few hours "lost" in research (I'll be with you in a minute - I've just got to finish this article . . . Damn!, stumped, . . . err,

hang on a sec, just got to check something, (I'll beat this b....y thing yet!)).

In fact, I've lost so much time "researching" (especially "Frog Fanny" and "Storehouse") that I haven't checked out ALL the games supplied (It's a dirty job, but somebody's got to do it!). I can tell you, though (and you've probably guessed, anyway) that I am hooked!

I can highly recommend this set of two disks (four disk sides) to all those who enjoy a good computerised solitaire.

Available from:

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P.O. Box 244
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N.S.W. 2528

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**GEOS FAX SOFTWARE
RELEASED**

For those users out there with an Xetec printer interface, you will know how much of a nuisance that little red wire that attaches to the cassette port can be. Now there is a way to get rid of it for good.

For years that wire has been a hassle to me, but no longer. In issue number #118 of Loadstar, Fender Tucker wrote an article on how to remove the offending wire. I tried it and it was such a simple job (If I can do it anyone can!) that I have now written this article based on Fender's work.

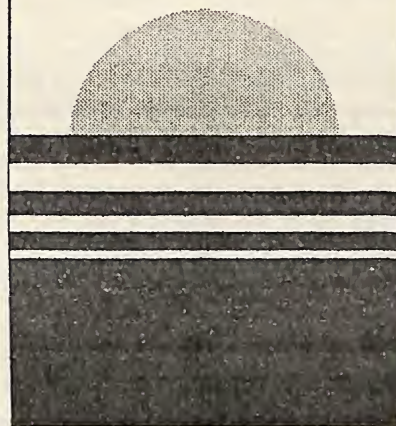
The theory behind the reason for the wire is that in the early days of the 64 many printers didn't have five volts on pin 18 of the 36-pin parallel connector that goes to the interface. To make sure that the interface could find the power to run the interface chips, the designers decided to get the required power from a place they knew had the necessary voltage available: the cassette port of the computer.

Well, just about all printers these days have five volts available at pin 18. Look in your printer manual and you'll see if your printer does in fact have the necessary voltage where it is required. If not, you can forget about doing this unless you understand electronics and can find the necessary five volts elsewhere on the printer.

The plan is to get the voltage needed to power the interface from the printer, not the computer. You don't have to be an expert at soldering to do this. The job merely involves removing a wire from the PC board within the interface, then sticking another wire in its place and resoldering it. If you know someone with some soldering experience, ask them to do it for you if you don't want to do it yourself.

First remove the interface from the system completely and then open it up by removing the one screw in the centre of the back. Use a small screwdriver to pop open the two halves of the case. This frees the PC board.

You'll notice that the grey cable goes to the 36-pin parallel connector and the black cable goes to the round five pin Commodore serial connector. Each cable has the same coloured wires inside. The



Removing the Xetec Interface Wire

two wires that we're interested in are:

1. the wire that comes out of the black cable the same colour as the cassette port wire, and
2. the wire (which is usually red) that comes out of the grey cable and is attached to pin 18 of the parallel connector.

Both connect to the PC board but on opposite sides.

If you take a close look at where the red wire that comes out of the grey cable attaches, you'll see that it's connected to nothing. It's soldered to a pad on the board but that pad is attached to nothing.

You can test it if you wish using an ohmmeter. The resistance between the pad and pin 18 will be zero. Pin 18 is the last pin on the right on the top (wide side) of the connector. If you look closely, you'll see an "18" embossed above it on the blue plastic.

The wire that comes out of the black cable is connected to a pad that is connected, amongst other things, to the end pins of the notched end of the IC chips. These pins are where most IC chips get their working voltages from.

So now all that has to be done is to remove both wires from the PC board with a soldering iron. Just heat the pad gently and pull the wire out of the little hole. The holes will fill with solder but that's OK.

The wire that comes from the black cable can be clipped or taped as it is no longer used.

The other wire now has to be soldered into the hole where the cassette port wire came from. Just heat the pad from the bottom and push the wire through. Once the wire is through remove the soldering iron and the connection will be made.

Now put the PC board between the two plastic covers, line up the cables with the notches that hold them in place, snap the two pieces back together and replace the screw. That's the job done.

Now you can either cut off the red wire at the computer end or wrap it up with tape. It is probably best just to wrap it up with tape in case you ever have to use it with another printer that doesn't have the five volts available at the printer end or the interface can't get the power from pin 18 for some other reason. It's then just a simple matter to unsolder and swap the two wires inside the interface.

The two main advantages of this simple operation are that first of all that little red wire that always seems to be getting in the way is gone, and secondly, by getting power from the printer the interface is initialised when the printer is turned on, not when just the computer is turned on.

Although this article talks specifically about the Xetec interface, you should be able to do the job on any interface that has a wire going to the cassette port.

Just a couple of words of warning. Although this is a very simple task, do not attempt it if you do not feel competent enough with a soldering iron. Get a friend to do it for you. If your printer manual doesn't say that pin 18 carries the necessary five volts, leave the interface the way it was. You'll just have to put up with the wire going to the cassette port. If your interface doesn't have nicely colour-coded wires that are easy to trace, you are better off leaving it unless you know how to use an ohmmeter to trace each wire.

Although I have performed this operation on my own Xetec interface I will not be responsible for any work you do on your own interface. I have had some soldering experience, so please get someone who knows how to solder properly if you do not have any experience yourself.

My thanks to Fender Tucker for his original article in Loadstar #118. This encouraged me to do the job on my own interface and then write this article.

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Commodore
NETWORK
August 1995

A Taste for Adventure



YUKON!

LANDING THE PLANE

You begin in a ski equipped piper cub, high above a desolate area of the Canadian wilderness, GET RIFLE - LAND (You've made a perfect landing in an open area: the frozen surface of a large lake... the plane is breaking through the ice... better get out fast), OUT, E.

WARM CLOTHES/NOTE

E to cabin (leave the yellowed piece of paper alone or it will crumble into dust), GET pair of fur-lined BOOTS, GET JACKET, WEAR JACKET, READ NOTE (it is the will of Yukon Jack. It says: TO WHOM IT MAY CONCERN: Since I have no relatives my silver mine will become the property of whomever can find the deed to it. But beware - I'll tolerate no claim jumping - I may be dead but that doesn't mean I'm gone!), W.

GRIZZLY BEAR/ CAVE IN

N to old trail on eastern edge of the forest, W, W, N to northern edge of forest, LIFT ROCK (you find a ring of keys under it), Get keys, S, E, S, S, GET SHOVEL, E, GET

This month we bring you a special "help" file for those of you stuck in the adventure Yukon. This was submitted by Heath Kirby Miller for inclusion on Disk-Coverer, but because it arrived too late to find its way on to our disks, I decided to insert it in this issue. Have fun!

CAN of kerosene, W, W (leave the gold dust for the moment), W, GET kerosene LANTERN, FILL LANTERN (with kerosene), DROP empty CAN, N, SHOOT BEAR with rifle (if you don't kill him the first or second time then SHOOT BEAR once more). DROP RIFLE, W, N TO shed, GET MATCHES, S, E to large building, UNLOCK GRATE with keys, OPEN GRATE, LIGHT LANTERN with matches, DROP MATCHES, D, D, S, E (CAVE IN! A support beam gives way and part of the ceiling collapses. You're trapped! you quickly set to work with your shovel... you manage to clear an escape route through the fallen rubble), W, N, E, D to a small chamber cut out of solid rock, GET, mountain climbing GEAR, U, W, U, U, DROP SHOVEL.

CAVE/LOCKED DOOR/WOLVERINE/TEAM OF DOGS

GET HARNESS, E, N, GET LADDER, S, E, S, E, N, S, S, S to strange building (the entrance is almost 10 feet off the ground), DROP LADDER (it barely reaches to the doorway), N, N, N, E, E to foot of rock face, CLIMB MOUNTAIN (you made it), E, S, UNLOCK DOOR, DROP KEYS, OPEN DOOR, S to storage room, GET FURS, GET DEED to Don Quixote mine, N, N, N, GET TRAP, S, W, GET CROWBAR, D, W, W, S, S, S, S, U, DROP TRAP,

TAP WOLVERINE (You've trapped yourself a wolverine), GET MEAT, D, N, N, E to cabin, DROP CROWBAR, W, N, GET SHED, W, DROP HARNESS, DROP SLED, FEED DOGS (the dogs throw themselves on the meat and consume it in a matter of moments. They become excited at the sight of the harness - they've been through this routine many times before. In a few moments you've harnessed the dogs to the sled (You've got yourself some real transportation now!).

FLOORBOARD

E, S, E to cabin, GET CROWBAR, PRY loose FLOORBOARD (SCREEEEEECH.... there is a tin box hidden underneath), GET BOX, DROP CROWBAR, OPEN BOX (it's filled with money!)

MINING FOR SILVER

W, S, W, W, N, W, W to inside a large building, GET SHOVEL, D, S, E, GET SILVER (You've mined quite a bit of silver when suddenly the ghost of Yukon Jack appears from out of a blue fog. He takes the deed from your hand and says "This is your mine now - so get back to work! you've got to get that silver to the bank!", DROP SHOVEL.

PANNING FOR GOLD

W, N, U, U, DROP LANTERN, E, S, E, to the bottom of the ravine, PAN GOLD (you've struck it rich! In a very short time you've panned enough gold to fill the leather pouch you found in one of your jacket pockets!), DROP PAN.

RIDING THE SLED/TRADING WITH THE ESKIMO

E, N, to eastern shore of lake, N, W to evergreen forest (the sled harnessed dog team are here), ON SLED, E, MUSH, W to Eskimo village (a smiling Eskimo approaches - looks like he wants to trade with you), TRADE FURS with Eskimo (he nods enthusiastically, takes the furs and hands you a small object in return), (Inventory (you have a small statue carved from walrus ivory), E, MUSH (you see the town of Dawson in the distance - civilisation at last!), N to main street of Dawson, OFF SLED,

DEPOSITING TREASURES AT BANK

E to bank (a large sign near one teller's window reads: "Welcome adventurer's - Deposit your treasures here to score"), Drop

small STATUE, DROP DĒED to Don Quixote mine, DROP BOX, DROP SILVER, DROP GOLD dust....

Congratulations!

You have proved yourself worthy of the title of 'adventurer'.

You have:

braved the Arctic cold

fought savage beasts

climbed rugged mountains

Cheated death deep within the earth

And travelled the barren Arctic wastelands alone - an accomplishment unmatched.

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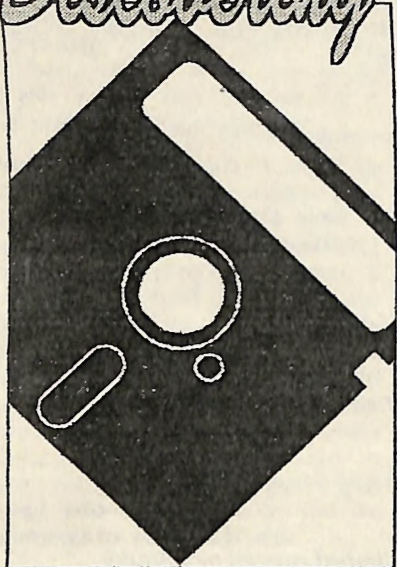
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Discovering Disk-Coverer #12



MAY DISK-COVERER

We've only described the August disk set here. Due to the fact that we could not issue the May disks in May, they have been issued with this month's magazine, BUT you will need to look up the MAY issues "Discovering Disk-Coverer" for a run-down of the contents.

APPLICATIONS

VCR LIBRARY V2.0

An attractively presented database for recording the title of each item on the VCR tapes in one's collection. The number of titles per tape are selectable and 140 tapes can be entered on one disk. The program has on-screen instructions and printing labels for cassettes is also possible.

COSMI TEXT PRO

A word processor which lacks most of the usual features of a conventional piece of software of this nature. It does, however, have some interesting features of its own. Amongst other things, there is a novel editing option and printing can be right justified from within the program.

HOME INVENTORY SYSTEM V2.0

The original of this program escaped into the public domain from someone's 'too hard' basket. It has now been extensively corrected, has some additions, and should be useful in the calculation of household insurance cover.

SPEED READER

A simple program to assist in training the eyes to read speedily.

VIDEO JIGSAW

Something else to do with all those DOODLE and KOALA picture files you have collected.

PLAN A MENU

Calculate the nutritional value of your day's gourmet consumption and then find out how it will affect your weight.

DATA ORGANISER

A very versatile and user friendly database. One is able to set up the fields in tabulated columns and the overall width can be from 80 to 136 (condensed print) characters.

PLANNER

A quick check on the possible expenses of your next family trip.

ADDRESS BOOK.C

ADBK.DEL.C

A database intended for the creation of a mailing list - maximum 700 records.

ENTERTAINMENT

HOT & COLD MENU V2.3

Written by David R.Moffatt with 'The Quill'. The author provides an introductory menu with suggestions for using the two adventure games which come in the same package.

1. YUKON - You are in a ski-equipped Piper Cub high above one of the most desolate areas of the Canadian Wilderness. You have been lost for hours and your fuel is running out

2. SHIFTING SANDS. The HOT part of the duo. You are mysteriously transported to a desert where adventure awaits.

A solution for "Yukon" is published in this issue of C.N.

HOLY GRAIL SOLUTION

SUBSUNK SOLUTION

Sequential files containing solutions for these two adventures which were on Entertainment disk #11.

CRAZY CAVERNS

A multi level game from Tony Crowther, that master of joystick death traps.

SCATTERLINGS

Defend the earth from hordes of invaders! This colourful piece of original programming is from Will

Erdmann of Queensland.

Sortanos

According to the file the game is 'sorta like dominoes but not quite'.

CRITICAL MASS

A two player grid game based on the board game 'Explosion'.

Duo

A card game in which you match either values or colours.

GEOS

DEMO

A preview of the new GUI for GEOS which offers four drive support and compatibility with geoShell. For GEOS 128 in 80 column mode.

128 DUAL TOP

Desk Top replacement for GEOS 128

MIRROR, MIRROR

Mirror your geoPaint documents along the 'Y' axis.

PAINT ROTATE

Rotate, mirror, and invert an entire geoPaint document.

GEODIRPRINT2

An update on the earlier version 1.0, this supports two drives and either draft or high quality printouts.

GEOLIST2.0

Lists your directories to either disk or printer. Accesses up to three drives, and can handle 1541/71/81/REU devices.

WALTZING MATILDA

GeoPaint document containing the words to the great Australian folk song of the same name.

PCX/GEOPAINT V3

An updated and improved version of the popular PCX to GeoPaint conversion program by Doreen Horne. Two PCX files, 002.pcx and shpbttl.pcx come with it for you to convert. See article in this issue!

Naturally enough, this disk also comes with copies of GeoView and QuickView so that all documents are easily accessed for viewing.

UTILITIES

DISK HELPER 5.0

Has many of the usual disk housekeeping assists and a few that are not so usual. The program is attractively presented and there is on-screen HELP and an explanation for every function provided.

COPY-Q V1.1

A slow but probably the most accurate disk copier designed for the C64. It can be used as both a single and dual drive copier and, in addition, has a very useful scan option for checking the sectors of a disk for corruption errors.

ISEPIC FILE COPIER V2.1

Easy to use and seems quicker than many.

GREAT ESCAPES

Program your C64 to use some of the ESCape functions of the C128. The instruction file from the author, which is included, explains how this program should be used.

The program does load from the disk menu but if your disk is write-protected your drive will become

upset when the program is automatically run. On the other hand, if the disk is not write-protected the program file will be scratched and then re-saved.

SBS-EDITOR

or SIDE (to side) BORDER SCROLL EDITOR.

Using the character sets/fonts provided design scrolling messages. Also usable with this program are the four character sets (SETS 1-4) which are with SET EDITOR 4.2. The short demo shows how the created messages can be used as 'stand alone' programs or incorporated into other programs.

The author has provided an instruction file, which can be loaded and run from the disk menu. Once the opening screen is in view SPACE produces the information.

MEET THE MORFS

Please read the DOC.file which explains how to be rid of this program's fast loader if it is not compatible with your own system. You can extend the MORF family by using any other suitable KOALA (or like format) picture files you may already own.

SET EDITOR 4.2

A character set editor which comes with an extensive HELP file from the author. This file is referred to within the program as being in SPEEDSCRIPT text (screen codes). It has been converted to a SEQ.file for more general use.

RASTER BAR DEMO

YESTERDAY

A bit of nostalgia

Commodore Network Merchandising

9 Wadeson St, Cobram, Vic 3644

THE ULTIMATE CP/M COLLECTION

Encouraged by the acceptance of our "CP/M Corner" column, and realising that one of the major problems faced by 128 users who choose to delve into the depths of CP/M is knowing where and how to acquire software, we have put together this massive collection of material covering some 30 X 1541 disk sides, or 8 X 1581 disks, and we've made it available for only \$40.00

ALIVE! CLIPART COLLECTION #1

A collection of Print Shop style images compiled from various sources, and presented on 111 Fun Graphics Machine clip art screens. Each screen holds nine images. You will need FUN GRAPHICS MACHINE to utilise these. Comes with a printout of each graphic presented in a binder and at a total cost of only \$22.50

THE GEOZ COLLECTION

A huge collection of GEOS shareware and PD items put together over the years by Artie Stevens at GeoZ BBS, and added to by myself and others. Includes more than twenty disk sides of GEOS applications, three disk sides of desk accessories, one of Auto execs and input drivers, three of fonts, and thirteen of art. FORTY disk sides for only \$60.00

THE PROGRAMMER'S CROSS REFERENCE GUIDE

The definitive reference work for the programmer who wishes to translate programs between the following platforms - C64, C128, and Plus 4. Available as a print out and presented in a three ring binder, or as a sequential file on disk for you to print out at your leisure.

Binder: \$15.00

Disk: \$7.50

THE 1581 MASTERS COLLECTION

A collection of 1581 utilities and files, supplied on a 1581 disk. Ideal for owners of this drive or the new CMD PD series drives looking for utilities to help them get the most out of their equipment. \$5 to subscribers \$7.50 non-subscribers

THE 1571 MASTERS COLLECTION

As above, but for use with the 1571 drives. Includes programs to help you utilise your drive's ability to handle MS-DOS disks. \$5 to subscribers \$7.50 non-subscribers

SAMMANATHA'S GRAPHICS GOES GEOS

Yes, the popular Sammantha's Graphics in GEOS format, a must for those wishing to add a touch of Australiana to their GEOS documents.

\$5

GEOS BORDERS

by Norman B Gough

A selection of borders for use with GEOS. Two double sided disks for an unbelievable price of just \$7.50 the set.

CN GEOPAK #1

A selection of GEOS items fresh from Q-Link in the States. This double sided disk contains FULL documentation for most files. Disk contents include: Poster Print, Change BSW, various Fonts, Printer Drivers, and graphics, Unpublish etc.. A must for any GEOS collection.

\$5

CN GEOPAK #2

The long awaited second disk in our GeoPak selection. Full documentation is included. Two disk sides containing, amongst others: Mah Jong, DB Getfile, Fontloader, etc..

\$5

CN GEOPAK 128

A double sided collection of GEOS PD exclusively for the 128 \$5

ADVENTURE DISK #1

The first of our adventure collections.

\$5

ADVENTURE DISK #2

The follow up to the successful Adventure Disk #1 for the many adventurers out there

\$5

INTERCHANGE 64 and INTERCHANGE 128

Two disks devoted to specialised programs to help the translation of documents or graphics from other computer systems to the C64 and the C128 respectively.

Sold separately at \$5 per disk for subscribers, \$7.50 non-subscribers.

DEMO GRAPHICS TOOL DISK

A collection of tools for the budding (and experienced) demo artist.

\$5

DESOTO UTILITIES

An excellent multi-drive operating system for the C64. Handles 1541, 1571, 1581, CMD HD, and RAMLINK in any combination - EXCELLENT!

\$5

GRAFIX GALORE

Tom Stoehe

Subscribers to LoadStar will be familiar with Tom's Work. This collection is priced at \$10.95 and comes recommended.

SAMMANATHA'S GRAPHICS

By Sammantha Hayhoe

Looking to add a touch of Australiana to your printed output? Here is a collection of true blue graphics for PrintShop users.

\$5

SAMMANATHA'S GRAPHICS II

By Sammantha Hayhoe

52 new true blue Oz graphics and 67 brand new borders!

VIDEO SHOP

A multi featured graphics manipulation program capable of working with Print Shop, PrintMaster, Doodle, Koala and standard bit-map graphics. Comes complete with a disk of graphics and a disk of fonts and a detailed manual.

\$12.50

MOUSE MATS - \$4.95 each

I now have a range of no-name diskettes in both 5 1/4" and 3 1/2" formats

5 1/4" DS/DD - \$5.50 per box(10) \$50 per 10 boxes(100)

5 1/4" DS/HD - \$10.50 per box(10) \$95 per 10 boxes(100)

3 1/2" DS/DD - \$10.30 per box(10) \$88 per 10 boxes(100)

3 1/2" DS/HD - \$16.50 per box(10) \$150 per 10 boxes(100)

Disk Labels with write protect tabs - 100 for \$2

All items can be ordered from both

Commodore Network
9 Wadeson St.
Cobram
Victoria, 3644

C.N.P.D
44 Balfour St,
Nailsworth,
S.A., 5083.

If ordering 1581 disks, please remember that orders for these can only be serviced from the Cobram address.
Don't forget our \$2.00 post/packing charge.

All software orders within Australia should include \$2 to cover postage costs. New Zealand orders add \$3 Aus. to cover postage, and for orders from elsewhere, a postage fee of \$5 Aus. is necessary.

Diskette Orders should include postage of \$2 and 50cents per disk box within Australia, New Zealand Diskette Orders should include \$3 plus 50 cents a disk box per order. Sorry we cannot accept orders for diskettes from elsewhere.